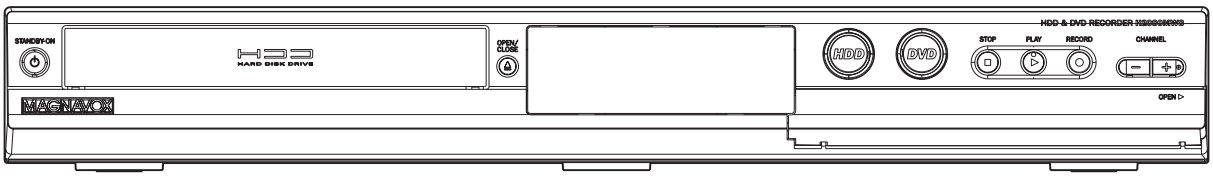
MAGNAVOX

SERVICE MANUAL

HDD & DVD PLAYER / RECORDER WITH DIGITAL TUNER

H2080MW8



IMPORTANT SAFETY NOTICE

Proper service and repair is important to the safe, reliable operation of all Funai Equipment. The service procedures recommended by Funai and described in this service manual are effective methods of performing service operations. Some of these service special tools should be used when and as recommended.

It is important to note that this service manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It also is important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Funai could not possibly know, evaluate and advice the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Funai has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by Funai must first use all precautions thoroughly so that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.

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SPECIFICATIONS

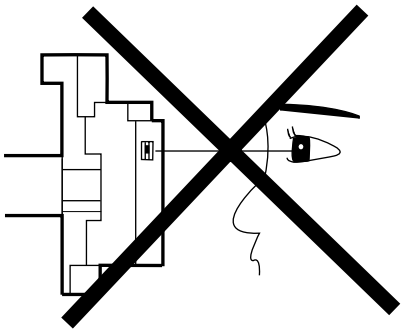
ITEM		
General		
	DVR	Internal 3.5 inch HDD 80 GB
	System	DVD+RW/+R,DVD-RW/-R,DVD-video,CD-DA,Video CD,CD-RW/-R
	Power requirements	120V AC +/-10%,60HzV+/-5%
	TV format	ATSC / NTSC-M TV standard
Recording		
	Recording format	+VR (video recording) format
	Recordable discs	DVD+ReWritable,DVD+Recordable DVD-ReWritable,DVD-Recordable (+VR mode only)
	Video recording format Sampling frequency Compression format	 13.5MHz MPEG
	Audio recording format Sampling frequency Compression format	 48kHz Dolby Digital
Tuner		
	Tuning system	Channel frequency synthesized tuning system
	Channel coverage (ATSC / NTSC) Terrestrial CATV	 VHF 2-13ch , UHF 14-69ch 2-13 , A-W , W+1-W+94(analog W+1-W+84) , A-5 - A-1 , 5A
Input/Output		
Front	Audio input RCA Jacks x 2	 2V rms (input impedance:more than 22kΩ)
Front	Video input RCA Jacks x 1	 1 Vp-p (75Ω)
Front	S-Video input Mini DIN 4-pin x 1	 Y:1 Vp-p (75Ω) C:286 mVp-p (75Ω)
Rear	VHF/UHF/CATV input and output F-type	 75Ω jacks unbalanced
Rear	Audio input RCA Jacks x 2	 2V rms (input impedance:more than 22kΩ)
Rear	Audio output RCA Jacks x 2	 2V rms (output impedance:more than 1kΩ)
Rear	Video input RCA Jacks x 1	 1 Vp-p (75Ω)
Rear	Video output RCA Jacks x 1	 1 Vp-p (75Ω)
Rear	S-Video input Mini DIN 4-pin x 1	 Y:1 Vp-p (75Ω) C:286 mVp-p (75Ω)
Rear	S-Video output Mini DIN 4-pin x 1	 Y:1 Vp-p (75Ω) C:286 mVp-p (75Ω)
Rear	Component video output RCA Jacks x 3	 Y: 1.0 Vp-p (75Ω), P_B/C_B, P_R/C_R: 0.7 Vp-p (75Ω)
Rear	Coaxial digital audio output RCA Jacks x 1	 500 mVp-p (75Ω)

NOTES:

1. All Items are measured without pre-emphasis unless otherwise specified.
2. Power supply: AC120 V 60 Hz
3 Ambient temperature: 5 °C ~ 40 °C

LASER BEAM SAFETY PRECAUTIONS

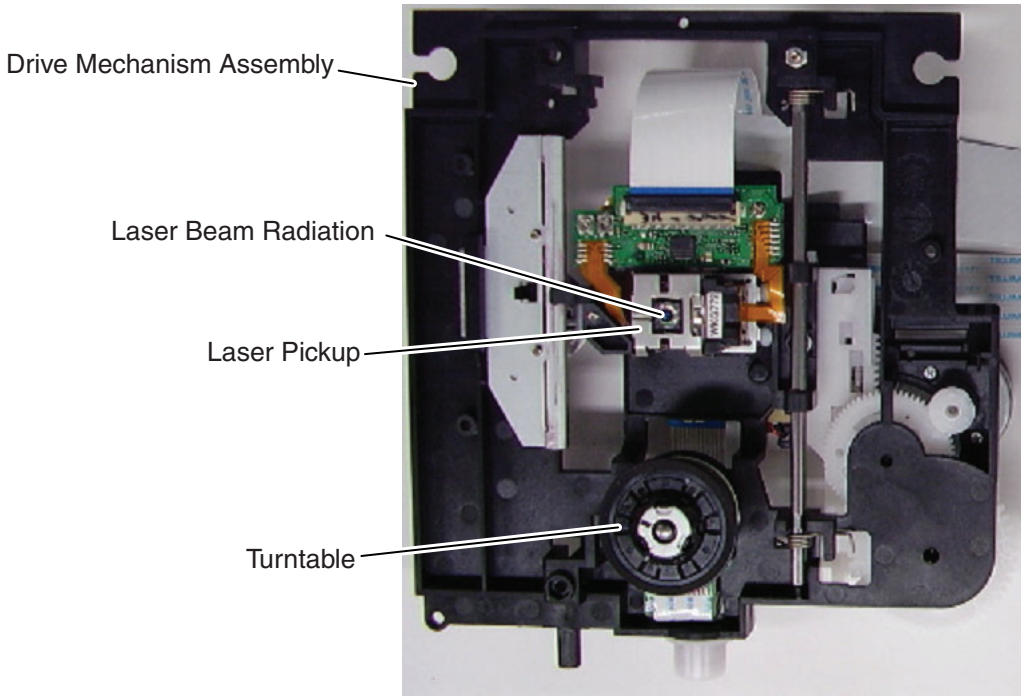
This DVD player uses a pickup that emits a laser beam.



Do not look directly at the laser beam coming from the pickup or allow it to strike against your skin.

The laser beam is emitted from the location shown in the figure. When checking the laser diode, be sure to keep your eyes at least 30 cm away from the pickup lens when the diode is turned on. Do not look directly at the laser beam.

CAUTION: Use of controls and adjustments, or doing procedures other than those specified herein, may result in hazardous radiation exposure.



DANGER - VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
CAUTION - VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ATTENTION - RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE EXPOSITION DANGEREUSE AU FAISCEAU.
注意 - ここを開くと可視及び不可視のレーザー光が出ます。ビームを直接見たり、触れたりしないでください。

Location: Inside Top of DVD mechanism.

IMPORTANT SAFETY PRECAUTIONS

Product Safety Notice

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a ⚠ on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. The Product's Safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are carefully inspected to confirm with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

Precautions during Servicing

A. Parts identified by the ⚠ symbol are critical for safety. Replace only with part number specified.

B. In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements. Examples: RF converters, RF cables, noise blocking capacitors, and noise blocking filters, etc.

C. Use specified internal wiring. Note especially:

1) Wires covered with PVC tubing
2) Double insulated wires
3) High voltage leads

D. Use specified insulating materials for hazardous live parts. Note especially:

1) Insulation tape
2) PVC tubing
3) Spacers
4) Insulators for transistors

E. When replacing AC primary side components (transformers, power cord, etc.), wrap ends of wires securely about the terminals before soldering.

F. Observe that the wires do not contact heat producing parts (heat sinks, oxide metal film resistors, fusible resistors, etc.).

G. Check that replaced wires do not contact sharp edges or pointed parts.

H. When a power cord has been replaced, check that 5 - 6 kg of force in any direction will not loosen it.

I. Also check areas surrounding repaired locations.

J. Be careful that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

K. When connecting or disconnecting the internal connectors, first, disconnect the AC plug from the AC outlet.

Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts, and wires have been returned to their original positions. Afterwards, do the following tests and confirm the specified values to verify compliance with safety standards.

1. Clearance Distance

When replacing primary circuit components, confirm specified clearance distance (d) and (d') between soldered terminals, and between terminals and surrounding metallic parts. (See Fig. 1)

Table 1: Ratings for selected area

AC Line Voltage	Clearance Distance (d), (d')
120 V	≥ 3.2 mm (0.126 inches)

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

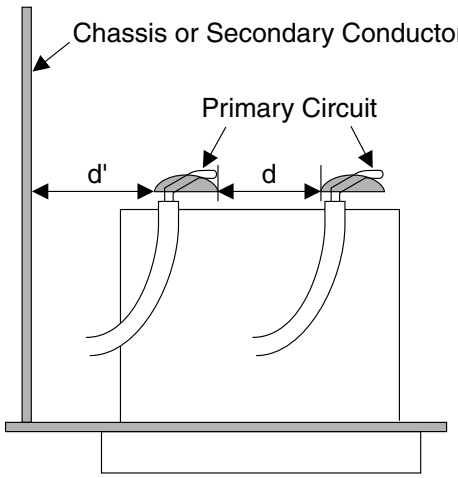


Fig. 1

2. Leakage Current Test

Confirm the specified (or lower) leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.) is lower than or equal to the specified value in the table below.

Measuring Method (Power ON):

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across the terminals of load Z. See Fig. 2 and the following table.

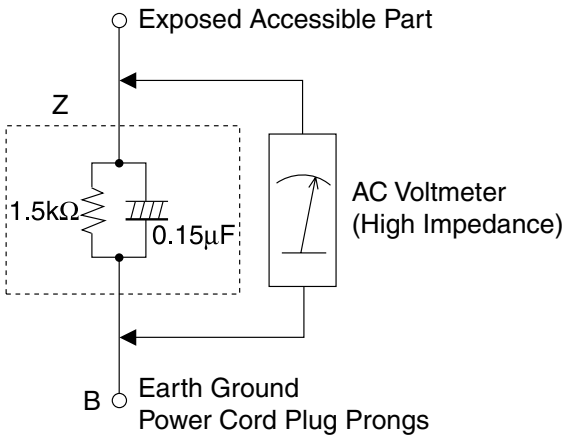


Fig. 2

Table 2: Leakage current ratings for selected areas

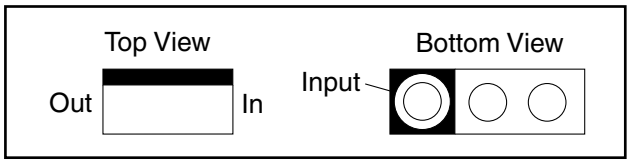
AC Line Voltage	Load Z	Leakage Current (i)	Earth Ground (B) to:
120 V	0.15 μF CAP. & 1.5 kΩ RES. Connected in parallel	i ≤ 0.5 mA Peak	Exposed accessible parts

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

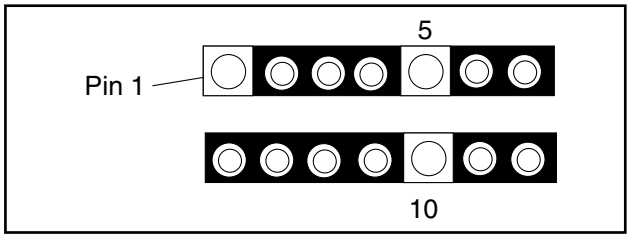
STANDARD NOTES FOR SERVICING

Circuit Board Indications

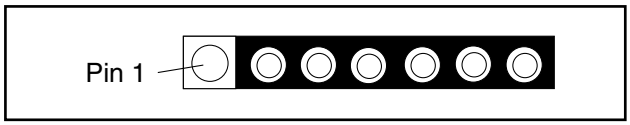
1. The output pin of the 3 pin Regulator ICs is indicated as shown.



2. For other ICs, pin 1 and every fifth pin are indicated as shown.

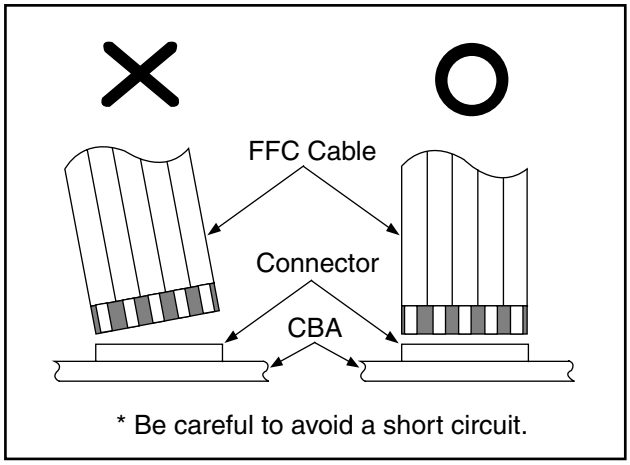


3. The 1st pin of every male connector is indicated as shown.



Instructions for Connectors

1. When you connect or disconnect the FFC (Flexible Foil Connector) cable, be sure to first disconnect the AC cord.
2. FFC (Flexible Foil Connector) cable should be inserted parallel into the connector, not at an angle.



Pb (Lead) Free Solder

When soldering, be sure to use the Pb free solder.

How to Remove / Install Flat Pack-IC

1. Removal

With Hot-Air Flat Pack-IC Desoldering Machine:

1. Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)

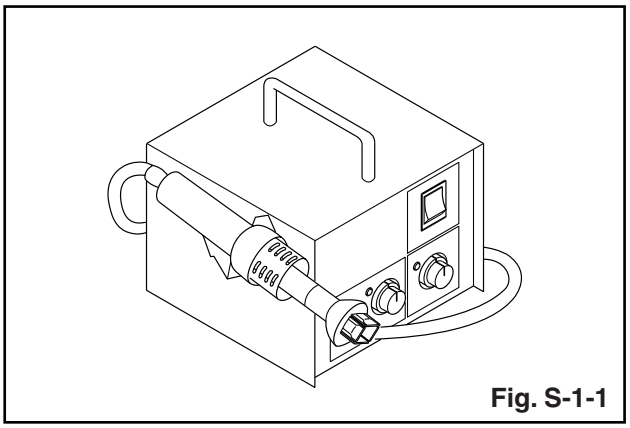


Fig. S-1-1

2. Remove the flat pack-IC with tweezers while applying the hot air.
3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

CAUTION:

1. The Flat Pack-IC shape may differ by models. Use an appropriate hot-air flat pack-IC desoldering machine, whose shape matches that of the Flat Pack-IC.
2. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)

3. The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder lands under the IC when removing it.

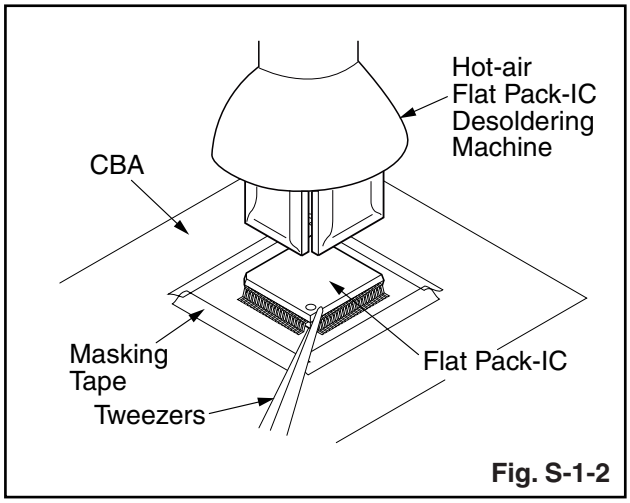


Fig. S-1-2

With Soldering Iron:

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)

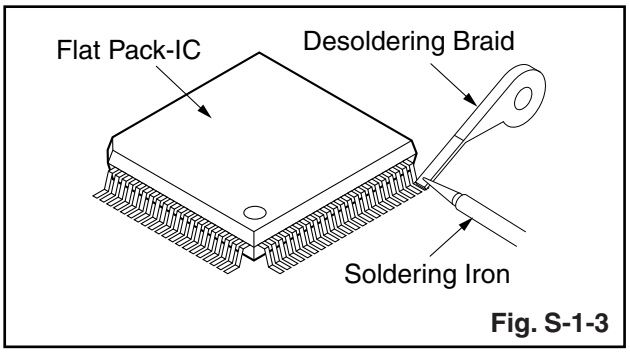


Fig. S-1-3

2. Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)

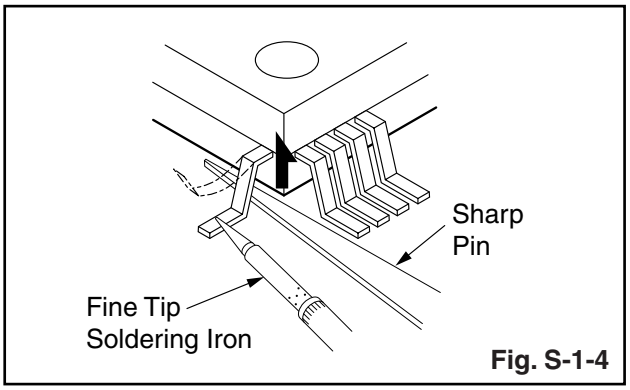


Fig. S-1-4

3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

With Iron Wire:

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)
2. Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.
3. While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig. S-1-5.
4. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
5. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

Note: When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.

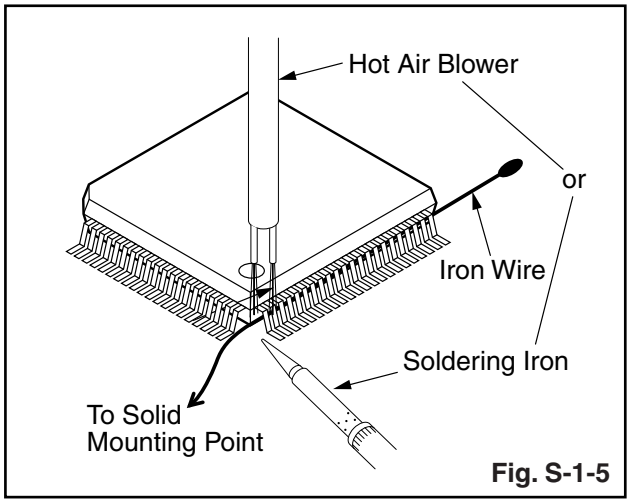


Fig. S-1-5

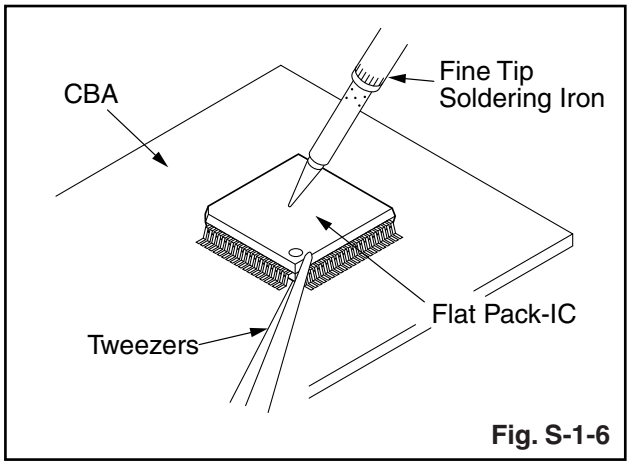


Fig. S-1-6

2. Installation

1. Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA so you can install a replacement flat pack-IC more easily.
2. The "●" mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the 1 on the PCB when positioning for installation. Then presolder the four corners of the flat pack-IC. (See Fig. S-1-8.)
3. Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.

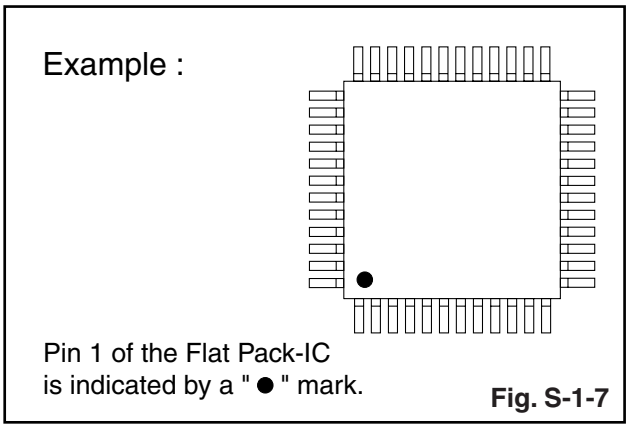


Fig. S-1-7

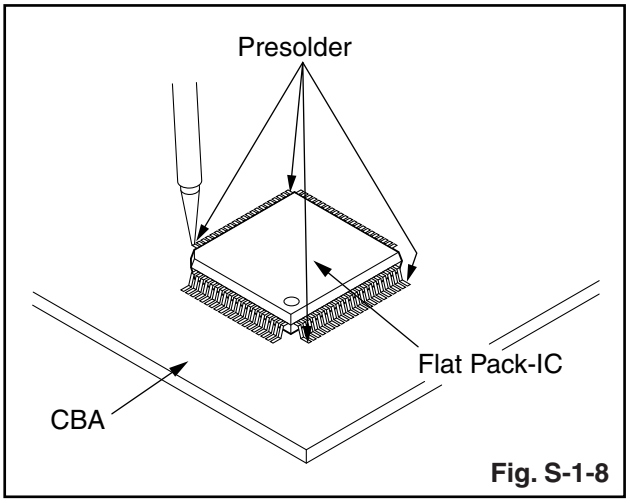


Fig. S-1-8

Instructions for Handling Semi-conductors

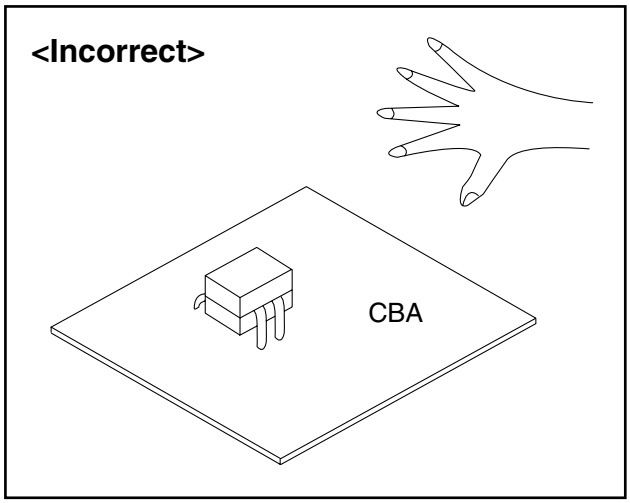
Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

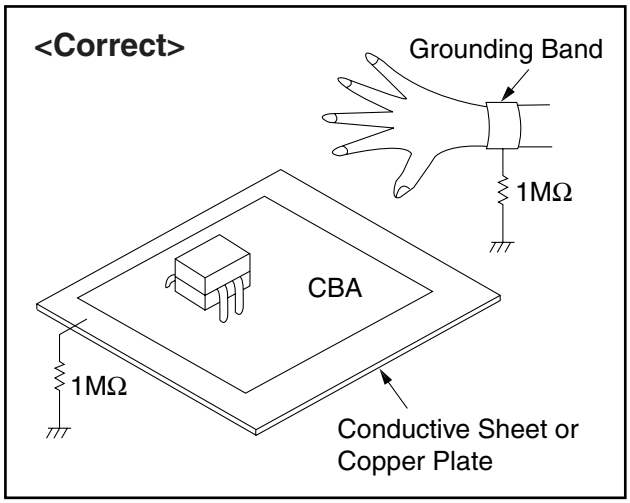
1. Ground for Human Body

Be sure to wear a grounding band (1 MΩ) that is properly grounded to remove any static electricity that may be charged on the body.

2. Ground for Workbench

Be sure to place a conductive sheet or copper plate with proper grounding (1 MΩ) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semi-conductors with your clothing.





HANDLING PRECAUTIONS FOR HDD

CAUTION:

1. SHOCK

a. Exposing HDD to shock may be the biggest damaging factor. Please note that HDD is easily damaged even if dropped from any height. Be sure to place HDD on a shock-absorbent mat. Also, be careful when transporting HDD.

b. Be careful not to subject HDD to any shock when tightening screws for HDD replacement. **(Tighten screws manually, not with an electric driver.)**

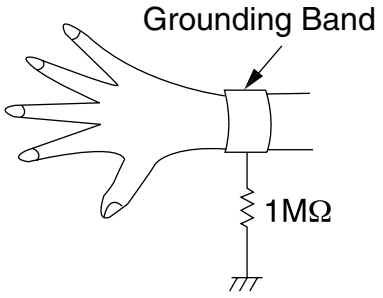
2. MOISTURE

a. Moisture may also be a damaging factor. HDD is semiclosed style. Sudden changes in ambient temperature may cause moisture to form. Monitor temperature and do not allow moisture to form on the media surface. Also, when opening HDD package, do so only after package is at ambient temperature.

b. After replacing HDD, leave it to reach room temperature (about 2 hours) for preventing dew internal condensation, and then work necessary task such as operation check.

3. STATIC ELECTRICITY

a. After removing HDD or taking replacement HDD out of the protective bag (the replacement HDD is packed in a protective bag), place HDD on a conductive surface. A grounding band should be worn when handling.



Both the conductive surface and grounding band should be grounded.

b. Make sure that HDD is placed on main unit completely and then let go of it, when assembling.

c. Do not put HDD on a packing bag. (for preventing electrostatic damage)

4. OTHERS

a. Be careful so as not to do the followings. Otherwise, HDD might be damaged.

- **DO NOT** disassemble HDD.
- When handling HDD, be sure to hold both sides securely.

b. HDD should be stored, packed in the protective bag, in suitable surroundings (i.e., no extreme changes in temperature to avoid condensation).

c. When transporting HDD, be sure to use the exclusive packing case (the replacement HDD carton).

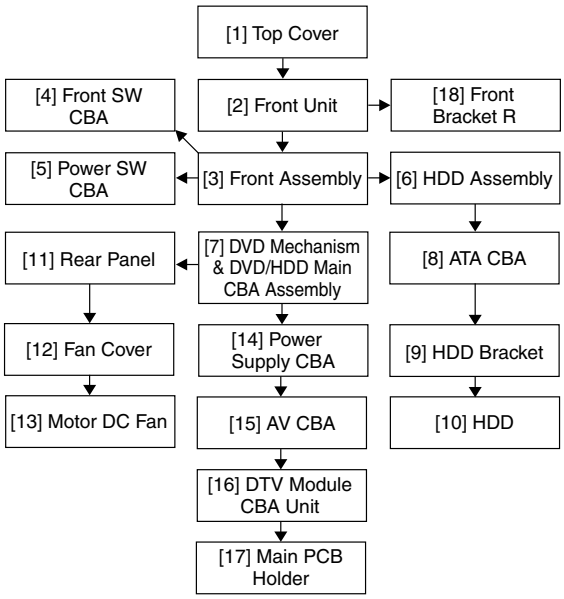
d. Do not stack HDDs.

e. Do not place vertically because HDD is unstable and easy to fall.

CABINET DISASSEMBLY INSTRUCTIONS

1. Disassembly Flowchart

This flowchart indicates the disassembly steps to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route, and dress the cables as they were originally.



2. Disassembly Method

ID/ LOC. No.	PART	REMOVAL		
		Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	Note
[1]	Top Cover	D1	7(S-1)	---
[2]	Front Unit	D2	*CN1003, *CN1061, *CN6003, *5(L-1), *3(L-2)	1 1-1 1-2
[3]	Front Assembly	D3	----------	---
[4]	Front SW CBA	D3	*CN1063, *2(L-3)	1-3
[5]	Power SW CBA	D3	(S-2)	---
[6]	HDD Assembly	D4	*CN651, *CN1002, 3(S-3)	---
[7]	DVD Mechanism & DVD/HDD Main CBA Assembly	D4	(S-4), 4(S-5), *CN101, *CN501, *CN701, PCB Support / PCB Spacers, M-PCB Plate Earth	2
[8]	ATA CBA	D5	*CN3001	---
[9]	HDD Bracket	D5	4(S-6)	---
[10]	HDD	D5	(S-7), HDD Earth Plate	3
[11]	Rear Panel	D6	*CN1601, (S-8), 6(S-9), (S-10)	---
[12]	Fan Cover	D6	2(S-11)	---
[13]	Motor DC Fan	D6	Fan Earth	---
[14]	Power Supply CBA	D7	*CN1001, 4(S-12)	---
[15]	AV CBA	D7	4(S-13)	---
[16]	DTV Module CBA Unit	D7	Module PCB Holder	---
[17]	Main PCB Holder	D7	(S-14)	---
[18]	Front Bracket R	D7	(S-15)	---
		↓ (3)	↓ (4)	↓ (5)

↓ (1) ↓ (2)

Note:

(1): Identification (location) No. of parts in the figures

(2): Name of the part

(3): Figure Number for reference

(4): Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
P=Spring, L=Locking Tab, S=Screw, CN=Connector
*=Unhook, Unlock, Release, Unplug, or Desolder
e.g. 7(S-1) = seven Screws (S-1),
5(L-1) = five Locking Tabs (L-1)

(5): Refer to “Reference Notes.”

ᴿReference Notes

1. Locking Tabs (L-1) ,(L-2) and (L-3) are fragile. Be careful not to break them.
   1-1. Release five Locking Tabs (L-1).
   1-2. Release three Locking Tabs (L-2) and remove the Front Assembly.
   1-3. Release two Locking Tabs (L-3).
2. **The DVD Mechanism & DVD/HDD Main CBA Assembly is adjusted as a unit at factory. Therefore, do not disassemble it. Replace the DVD Mechanism & DVD/HDD Main CBA Assembly as a unit.**
3. Whenever you have replaced the Hard Disk Drive, initialize the Hard Disk Drive. To initialize the Hard Disk Drive, perform the following.
   3-1. To put the HDD & DVD Recorder into the HDD mode, press the [HDD] button on the remote control unit.
   3-2. To put the HDD & DVD Recorder into the self-check mode, after pressing [V.SKIP] button, press the [0], [7], and [9] buttons on the remote control unit in that order within three seconds.
   3-3. Press [OK] button. The HDD & DVD Recorder is initialized and the power is turned off automatically after two seconds.

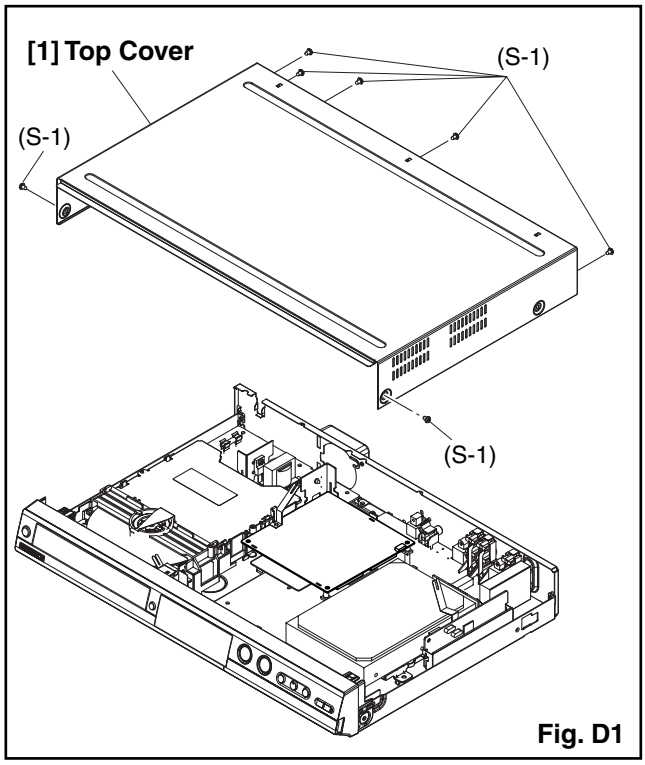


Fig. D1

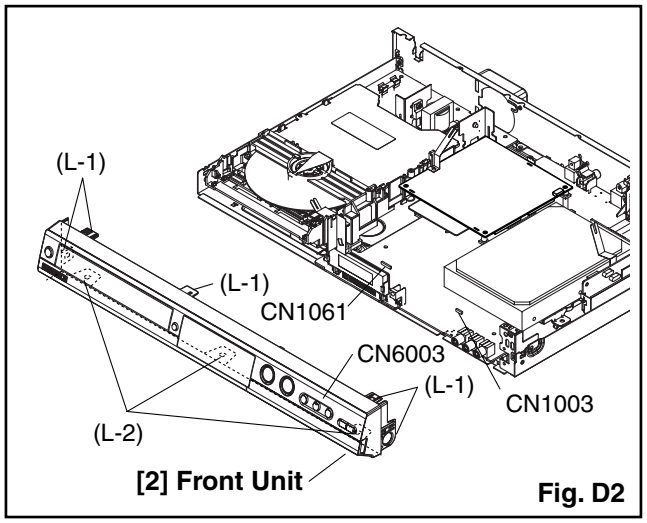


Fig. D2

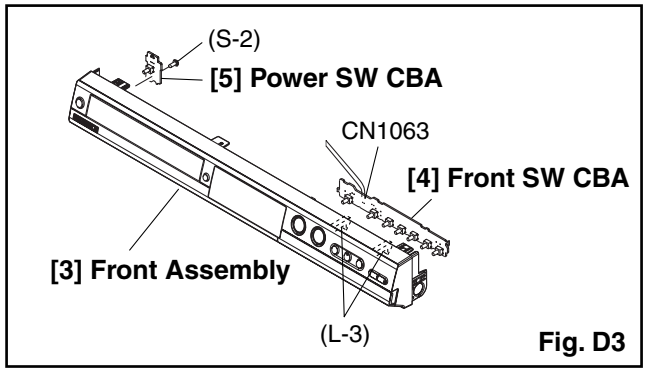


Fig. D3

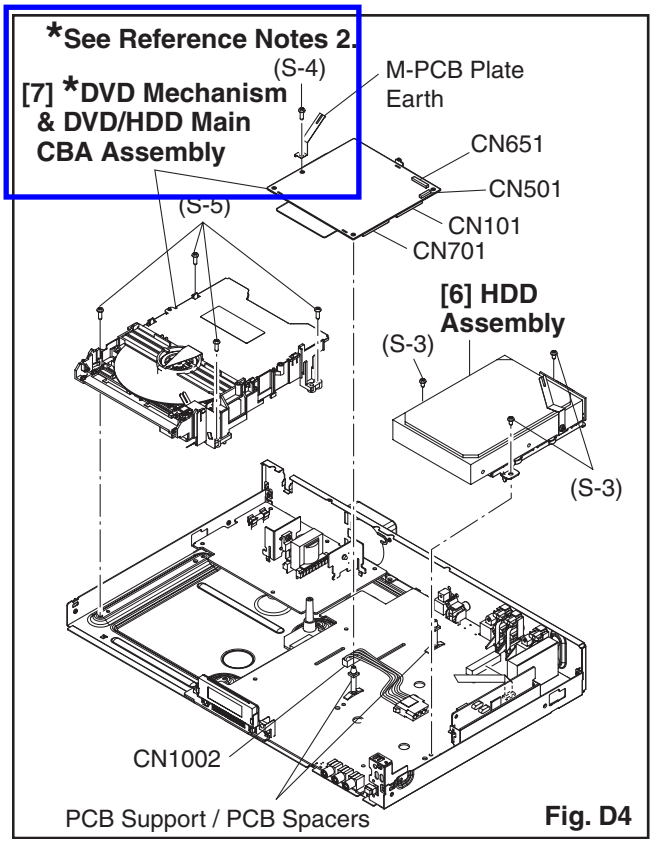


Fig. D4

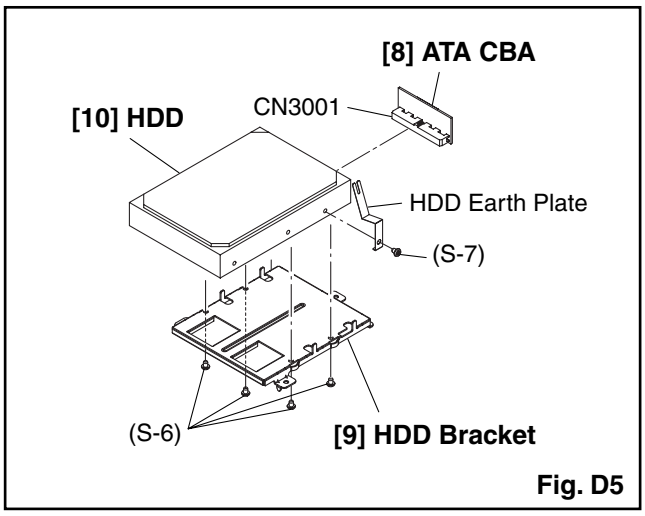


Fig. D5

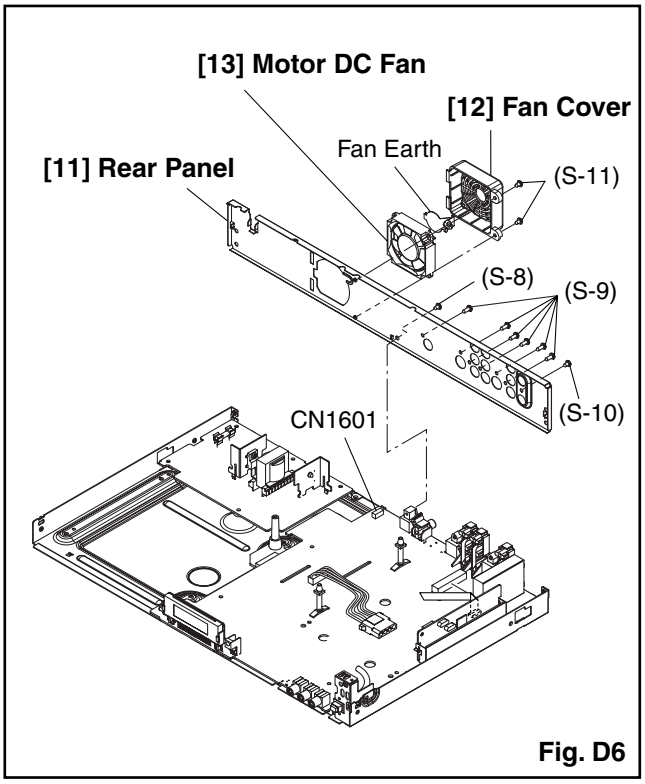


Fig. D6

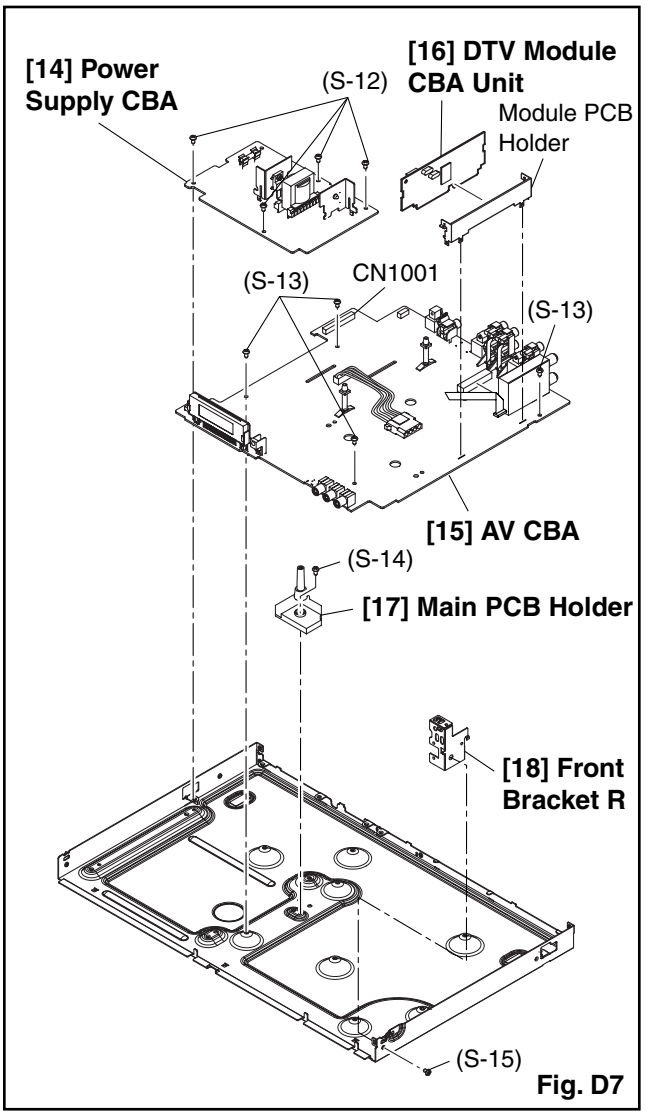
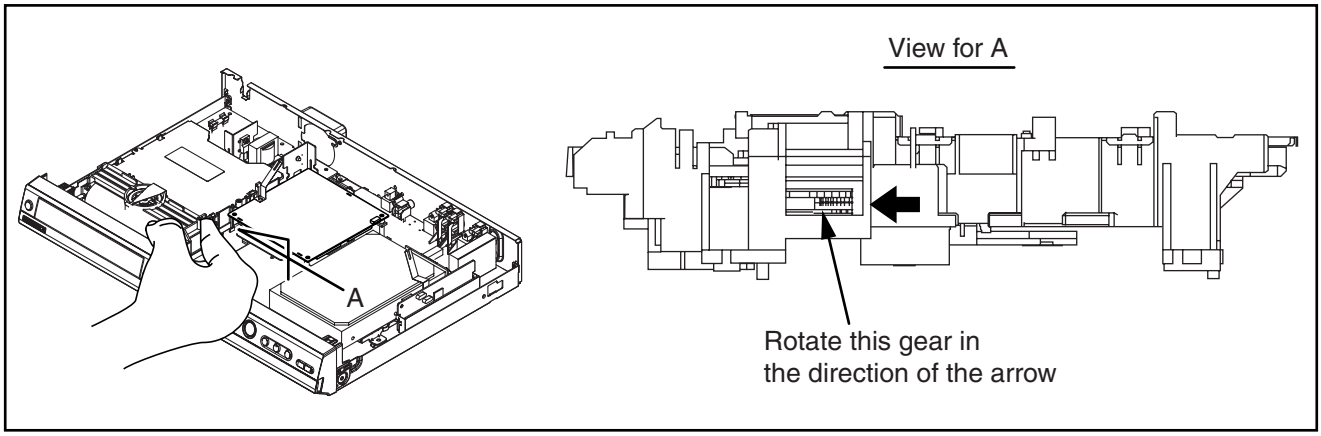


Fig. D7

4. How to Eject Manually

Note: When rotating the gear, be careful not to damage the gear.

1. Remove the Top Cover.
2. Rotate the gear in the direction of the arrow manually as shown below until the tray descends.
3. Pull the tray out manually and remove a disc.



HOW TO SELF-CHECK AND INITIALIZE THE HDD & DVD RECORDER

1. Turn on the HDD & DVD.
2. To put the HDD & DVD into the HDD mode, press [HDD] on the remote control unit.
3. To put the HDD & DVD into the self-check mode, after pressing [V.SKIP] button, press the [0], [7], and [9] buttons on the remote control in that order within three seconds.
   Fig. a appears on the screen and all LEDs light.

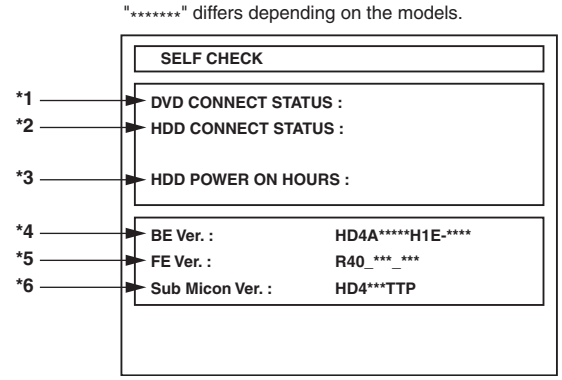


Fig. a: Self-Check Mode Screen

Table 1: Description of Fig. a

INDICATION	DESCRIPTION
DVD CONNECT STATUS (*1)	Connecting Condition of DVD(F/E)
HDD CONNECT STATUS (*2)	Connecting Condition of HDD
HDD POWER ON HOURS (*3)	Value of HDD power on hours obtained from S.M.A.R.T. command. (If not obtainable, value of HDD power on hours is “0”.) Value in parentheses is the factory setting value. (If no setting, the value is “0”.)
BE Ver. (*4)	B/E version
FE Ver. (*5)	F/E version
Sub Micon Ver. (*6)	Sub micro controller version

4. Upon the self-check completion, Fig. b appears on the screen.

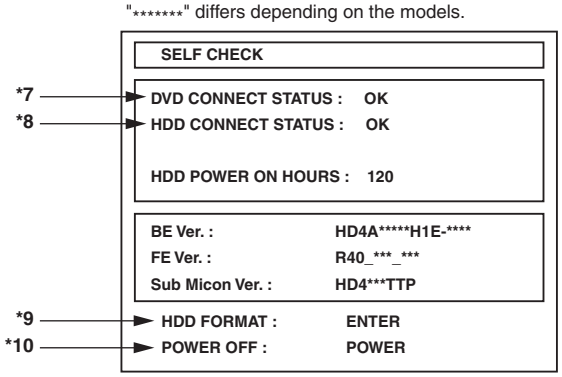


Fig. b: Screen of Finishing Self-Check Mode

Table 2: Indication of DVD self-check (*7)

INDICATION	DESCRIPTION
OK	Connection of DVD is normal.
NOT FOUND	DVD drive cannot be found.
CABLE ERROR	FFC cable (connecting to CN401) between the DVD drive and the DVD/HDD MAIN BOARD is not connected correctly.

Table 3: Indication of HDD self-check (*8)

INDICATION	DESCRIPTION
OK	Connection of HDD is normal.
NOT FOUND	HDD drive cannot be found.
CABLE ERROR	FFC cable between the BOARD ATA and the HDD drive is not connected correctly.

Table 4: Available button in self-check mode

BUTTON	DESCRIPTION
OK (*9)	Initialize (only when the self-check mode is complete)
STANDBY-ON (*10)	Turn the power off (when the self-check mode is complete)
OTHER	Not available

5. When the self-check mode is complete, press [STANDBY-ON] button to turn the power off.
   When initializing the HDD & DVD, press [OK] button. Fig. c appears on the screen. After two seconds, the power is turned off automatically.

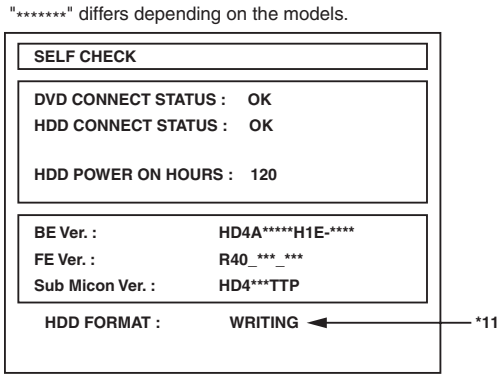

"*******" differs depending on the models.
SELF CHECK
DVD CONNECT STATUS : OK
HDD CONNECT STATUS : OK
HDD POWER ON HOURS : 120
BE Ver. : HD4A*****H1E-****
FE Ver. : R40_***_***
Sub Micon Ver. : HD4***TTP
HDD FORMAT : WRITING
*11

Fig. c: Initialize Mode Screen

Table 5: Description of *11 in Fig. c

INDICATION	DESCRIPTION
ENTER	Initialization preparation is complete.
WRITING	Initializing
OK	Initializing is finished normally.
NG	Initializing is not finished normally.

NOTE: When initializing, “Current Clock”, “Setup Changing Item”, “Channel Setup”, “Area Setup”, “Program” and “HDD Contents” are initialized.

FIRMWARE RENEWAL MODE

1. Turn the power on and remove the disc on the tray.
2. To put the DVD recorder into version up mode, press [V.SKIP], [6], [5], and [4] buttons on the remote control unit in the order. Then the tray will open automatically.
   Fig. a appears on the screen and Fig. b appears on the VFD.

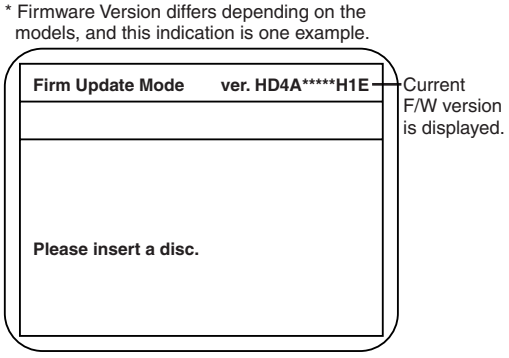

* Firmware Version differs depending on the models, and this indication is one example.
Firm Update Mode ver. HD4A*****H1E
Current F/W version is displayed.
Please insert a disc.

Fig. a Version Up Mode Screen

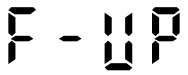


Fig. b VFD in Version Up Mode

3. Load the disc for version up.
   Fig. c appears on the screen. The file on the top is highlighted as the default.
   When there is only one file to exist, Step 4 will start automatically.

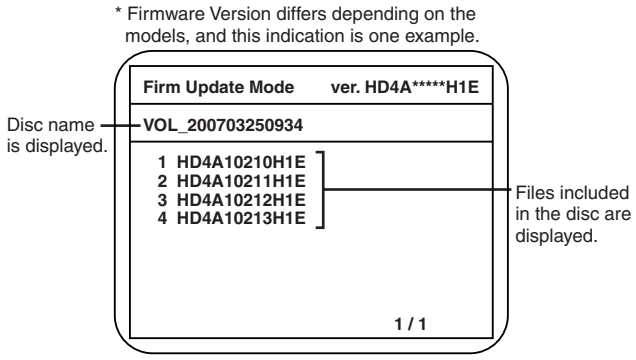

* Firmware Version differs depending on the models, and this indication is one example.
Firm Update Mode ver. HD4A*****H1E
Disc name is displayed.
VOL_200703250934
1 HD4A10210H1E
2 HD4A10211H1E
3 HD4A10212H1E
4 HD4A10213H1E
Files included in the disc are displayed.
1 / 1

Fig. c Update Disc Screen

4. Select the firmware version pressing arrow buttons, then press [OK].
   Fig. d appears on the screen and Fig. e appears on the VFD. The DVD recorder starts updating.

   About VFD indication of Fig. e:

   1) When Fig. d is displayed on the screen, “F-UP” is displayed on the VFD.
   2) When “Firmware Updating... XX% Complete.” is displayed on the screen, “10210” is displayed on the VFD.

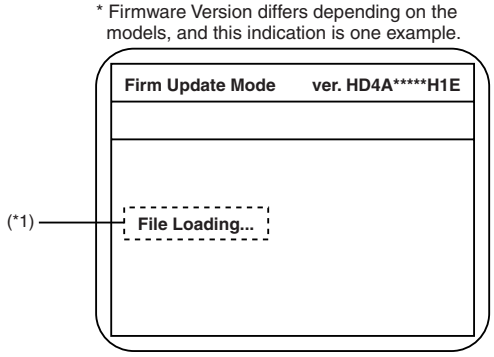

* Firmware Version differs depending on the models, and this indication is one example.
Firm Update Mode ver. HD4A*****H1E
(*1)
File Loading...

Fig. d Programming Mode Screen

Fig. e VFD in Programming Mode (Example)

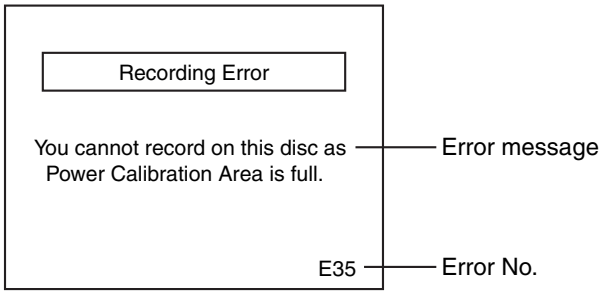
The appearance shown in (*1) of Fig. d is described as follows.

No.	Appearance	State
1	File Loading...	Sending files into the memory
2	Firmware Updating... XX% Complete.	Writing new version data
---	Firmware Update Failure	Failed in updating

5. After updating is finished, the tray opens automatically.
   At this time, no button is available.
6. Pull out the AC code once, then insert it again.

FUNCTION INDICATOR SYMBOLS

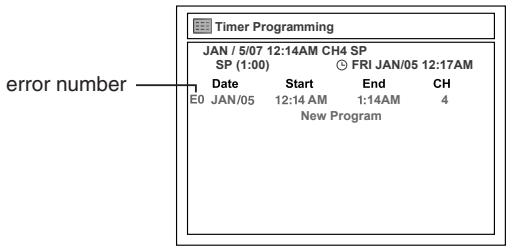
Note: If an error occurs, a message with the error number appears on the screen.



Message	Solution	Error No.	Error Description	Priority
Can not record on this disc.	Insert a recordable disc, and ensure the disc status satisfies the recording requirements.	1	An error occurs during data reading.	-
		2	There is no reply for 15 seconds in Test Unit Ready.	-
		3	Cannot write the data after trying three times.	-
		4	An error occurs with OPC.	-
		5	During recovery in a record.	-
		6	An error occurs even if recovery has been tried three times.	-
		7	An error occurs in a format.	-
		8	It cannot start an encode.	-
		9	NV_PCK/RDI_PCK is not in encoded data.	-
		10	Encode Pause condition continued for 10 minutes.	-
		11	Encode Pause condition continued in normal REC condition for 10 minutes.	-
		12	Difference in the address and cannot get Stream ID of RDI/VIDEO.	-
		13	It is a reply that “ATAPI is not readable.”	-
		14	Cannot write the data after recovering SMALL VMGI.	-
		15	Cannot write the data after DVD-R Reverse Track.	-
		16	An error occurs in Finalize Close.	-
		17	An error occurs in Rec Stop Close.	-
		18	An error occurs in PCA Full (DVD_R).	-
		19	Safety Stop occurs during editing.	-
		20	High Speed Disc.	2
		21	The disc is not formatted.	5
		22	Disc Error has occurred.	3
		24	The disc except DVD-R/RW or finalized DVD-R.	1
This program is not allowed to be recorded.	You cannot record copy-prohibited programs.	25	During the Macrovision picture input.	11
		26	During the CGMS picture input.	12
This program is not recordable in Video mode.	You cannot record copy-prohibited programs.	27	During the CGMS picture input. (Video Format Disc)	-

Message	Solution	Error No.	Error Description	Priority
This program is not allowed to be recorded on this disc.	You cannot record cop-y prohibited programs.	28	During the CGMS picture input. (VR Format Disc)	-
This disc is protected and not recordable.	Release the disc protection setting in the Disc Setting menu.	29	Disc Protected Disc.	6
Disc is full. (No area for new recording)	Insert a recordable disc with enough recording space.	30	No available recording space.	10
You cannot record more than 99 titles on one disc. (The maximum is 99.)	Delete unnecessary titles.	31	The 99 title limit has been reached. (Video Format Disc)	-
		32	The 99 title limit has been reached. (VR Format Disc)	-
You cannot record more than 999 chapters on one disc. (The maximum is 999.)	Delete unnecessary chapters.	33	999 chapter limit has been reached. (VR Format Disc)	-
You cannot record on this as Control Information is full.	Insert a new disc.	34	No available recording space for Control Information.	-
You cannot record on this disc as Power Calibration Area is full.	Insert a new disc.	35	PCA is Full. (in REC start)	4
This disc is already finalized.	Release the finalizing for this disc.	36	It is finalized. (Video Format Disc)	8
Can not record on this disc.	Repeat the same operation.	37	Access to outside of Memory Area.	-
		38	Sector Address is wrong.	-
		39	BUP writing error of chapter editing.	-
You cannot record more than 49 titles on the disc. (The maximum is 49.)	Delete unnecessary titles.	43	The 49 title limit has been reached. (+VR Format Disc)	9
You cannot record more than 254 chapters on the disc. (The maximum is 254.)	Delete unnecessary chapter marks.	44	The 254 chapter limit has been reached. (+VR Format Disc)	10
This program is not recordable in +VR mode.	You cannot record copy-prohibited programs.	45	During the CGMS picture input (+VR Format Disc).	12
The disc has no recording compatibility. Set “Make Recording Compatible” to “ON” to convert the disc.	Set “Make Recording Compatible” to “ON” to convert the disc.	46	Trying to record onto the +VR formatting disc that had been recorded by the other recorder when “Make Recording Compatible” setting is “OFF”,	7
You cannot record more than 600 titles on HDD. (The maximum is 600.)	Delete unnecessary titles.	47	The 600 title limit has been reached (HDD).	-
Can not record on this HDD.	Connect HDD.	48	Recording without HDD connected.	-
	Delete unnecessary programs.	49	HDD is Full.	-

If an error occurs during the timer recording, one of the following error numbers (40 to 42) or the above error messages (error number: 1 to 39 and 43 to 46) is displayed on the recording menu after timer recording.
(Once the screen of the program line is exited, the program line for the error will be cleared.)
(No Error Message is displayed for errors No. 40 ~ 42.)

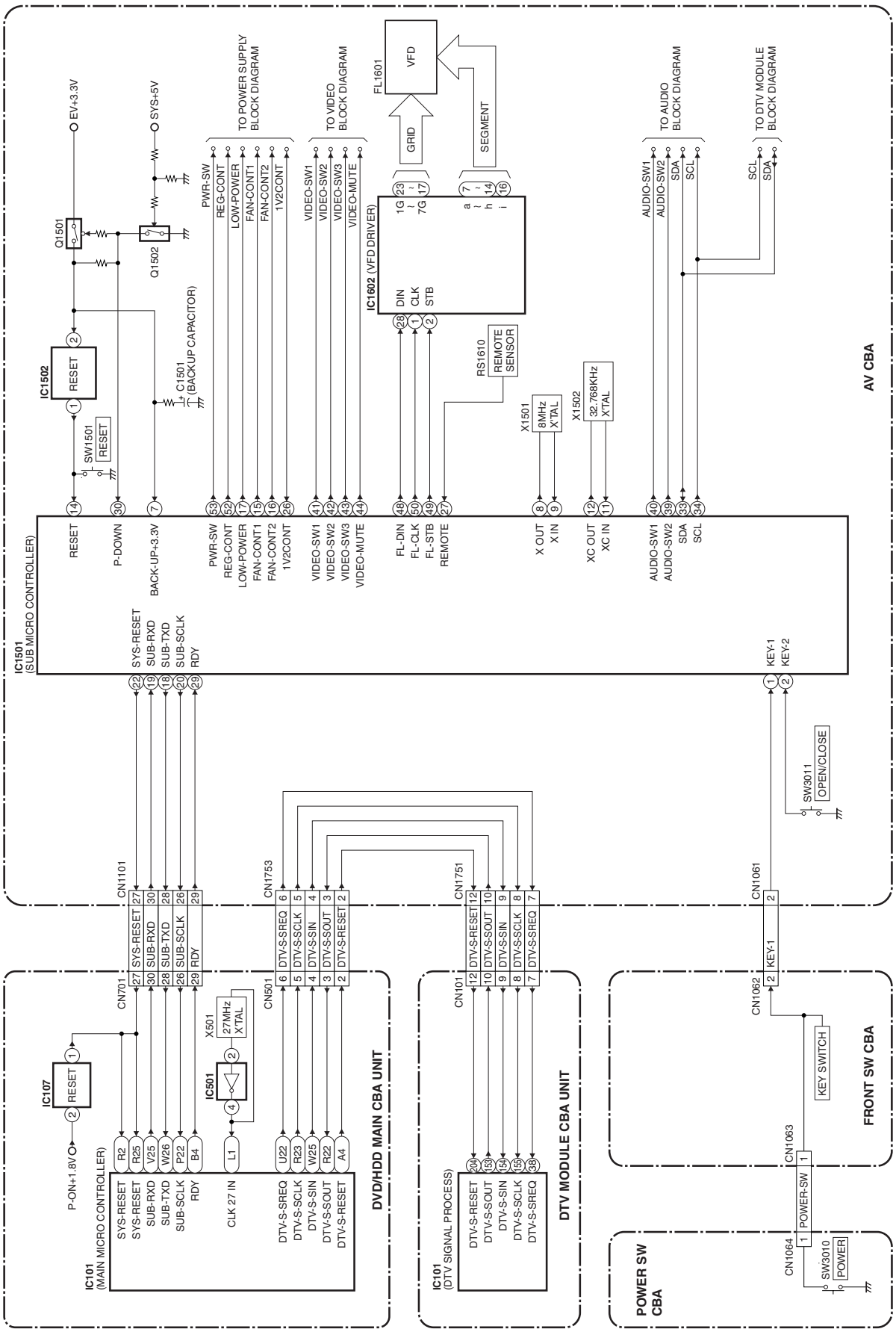


A program with an error number is grayed out and asterisked on the timer programming list.

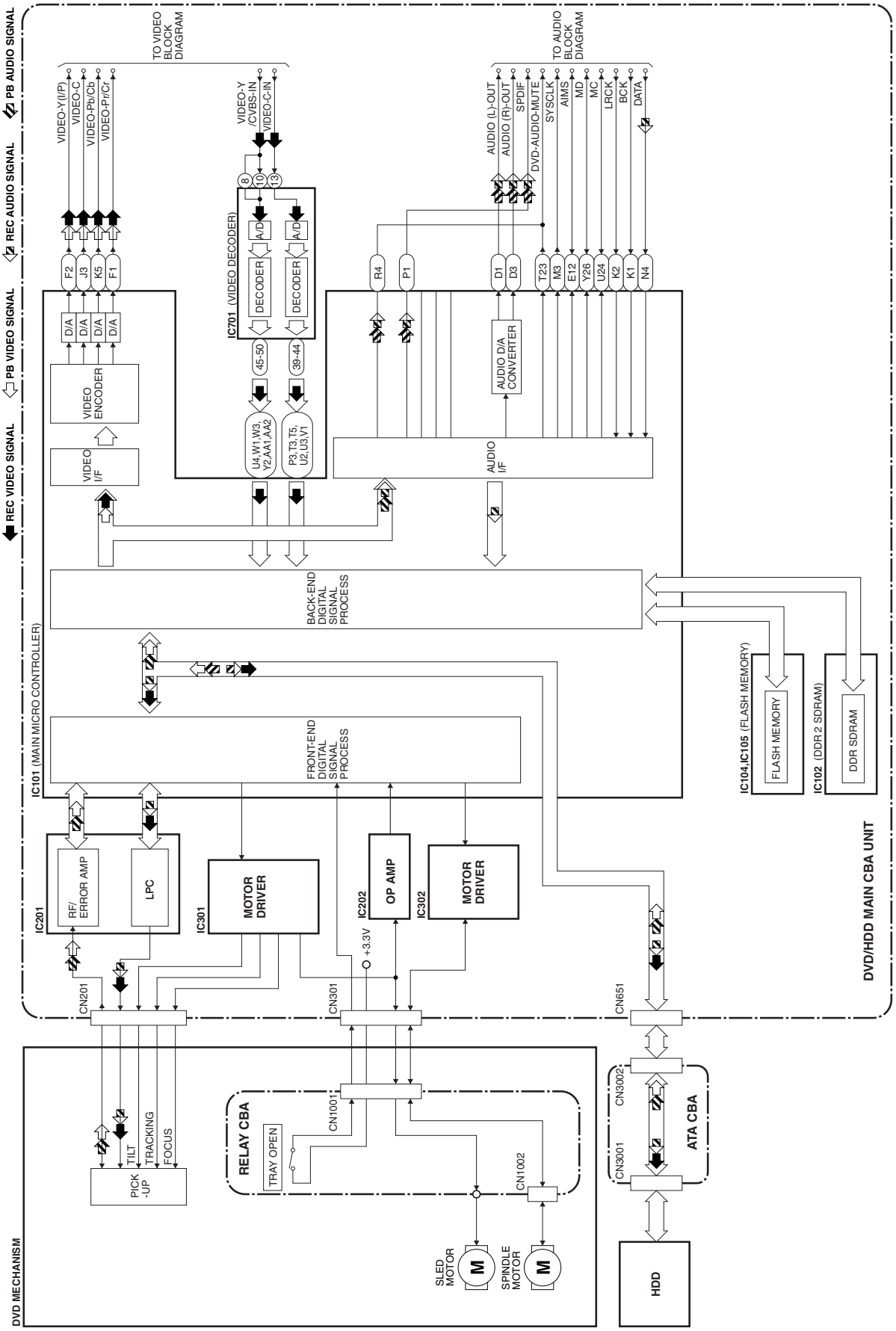
Message	Solution	Error No.	Error Description	Priority
Error message is not displayed.	- Set the timer programming correctly. - Set the timer programming before the start time.	40	- Some portion has not been recorded because of program overlapping. - Recording did not start at the start time.	-
	Turn the power on and set the clock correctly then set timer programming again.	41	Power failed	-
	Insert the recordable disc.	42	No disc when recording	-

BLOCK DIAGRAMS

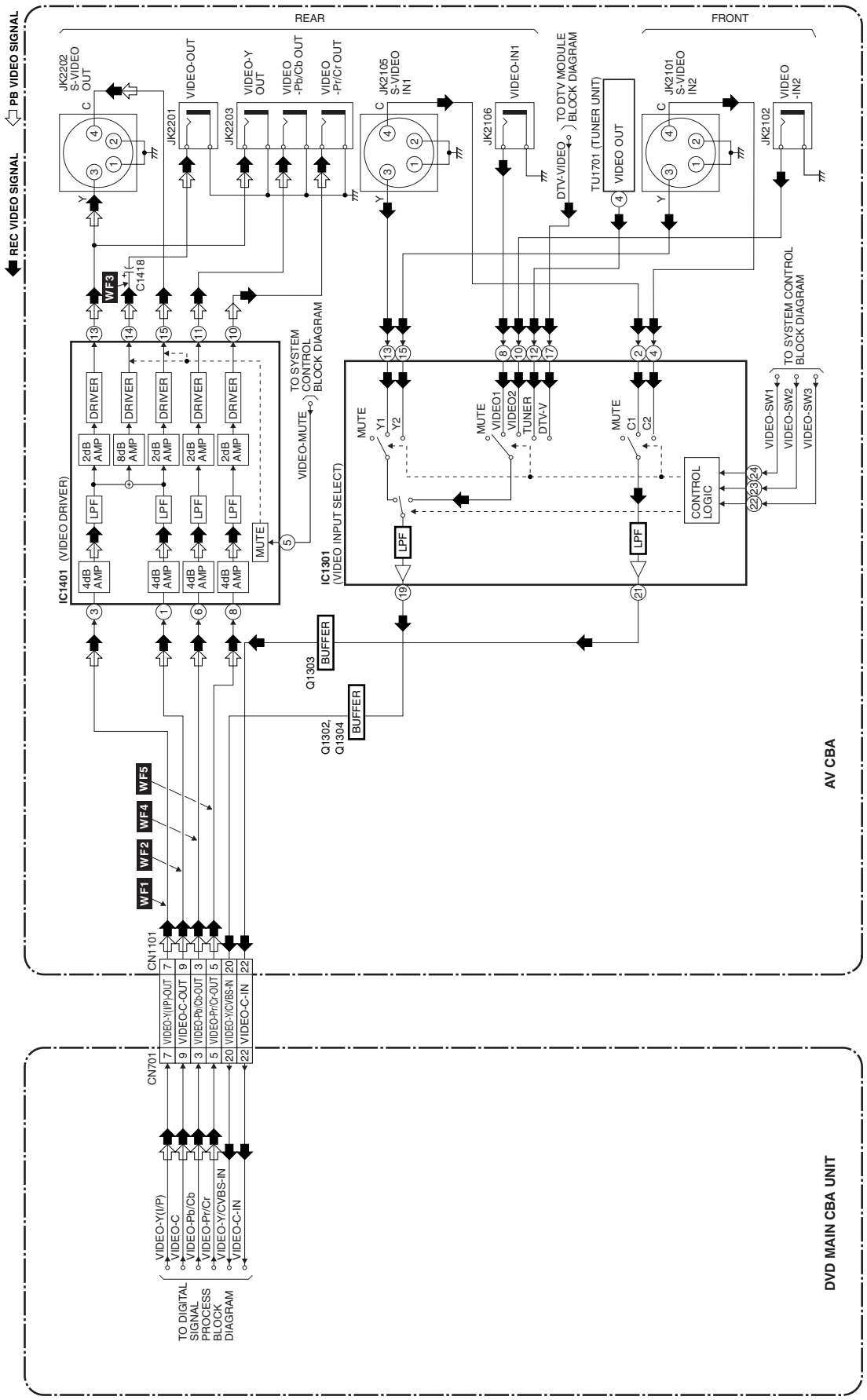
System Control Block Diagram



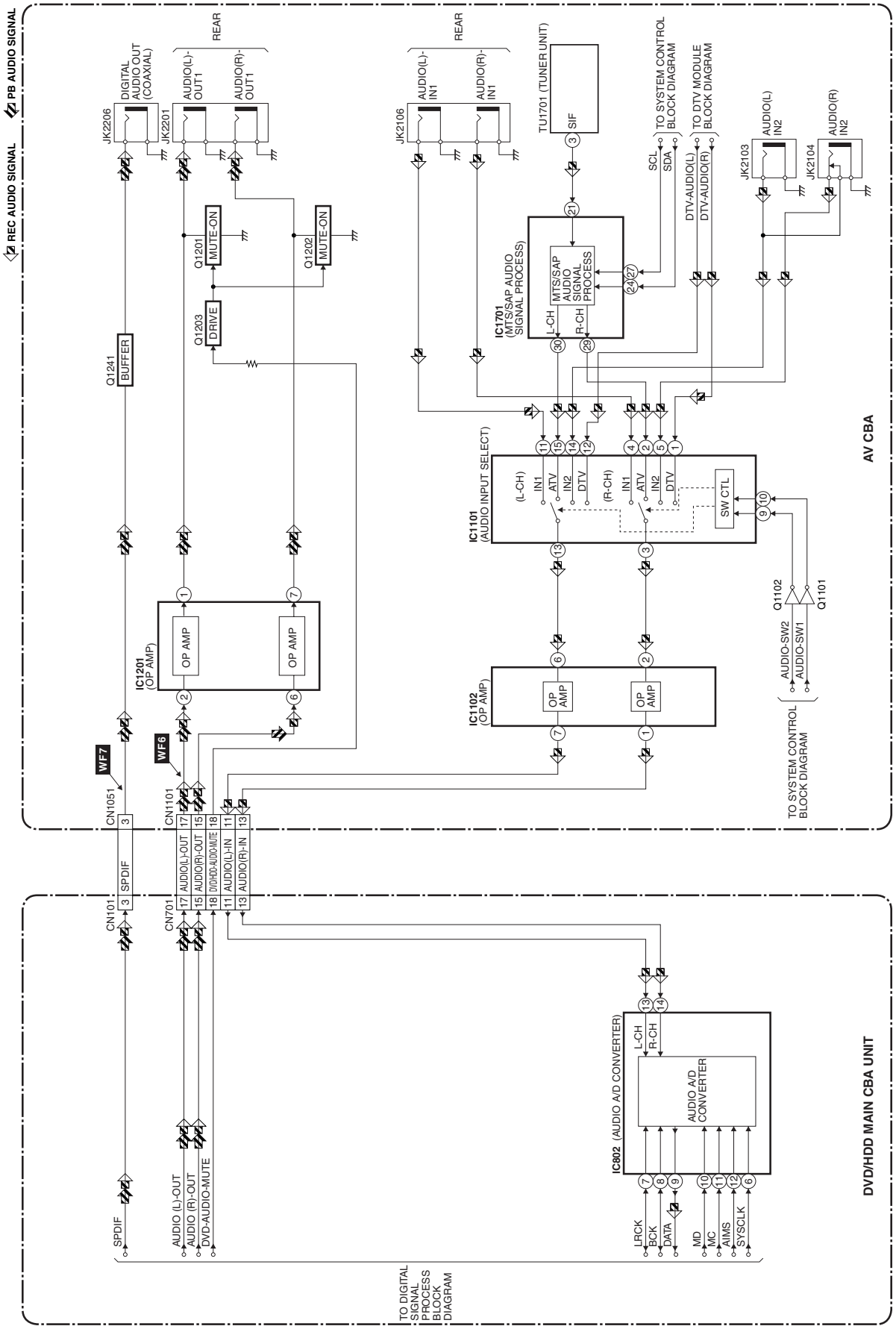
Digital Signal Process Block Diagram



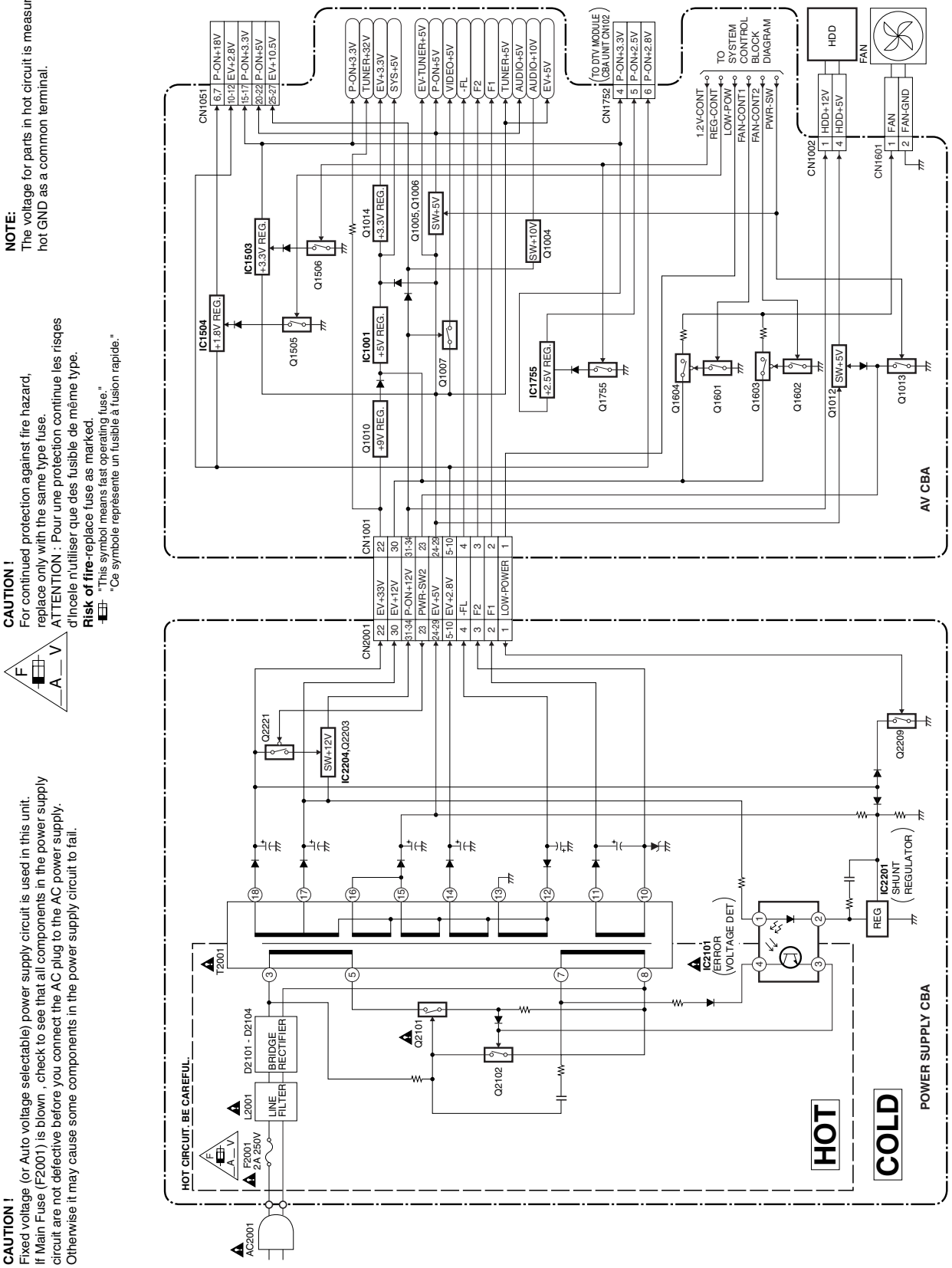
Video Block Diagram



Audio Block Diagram



Power Supply Block Diagram

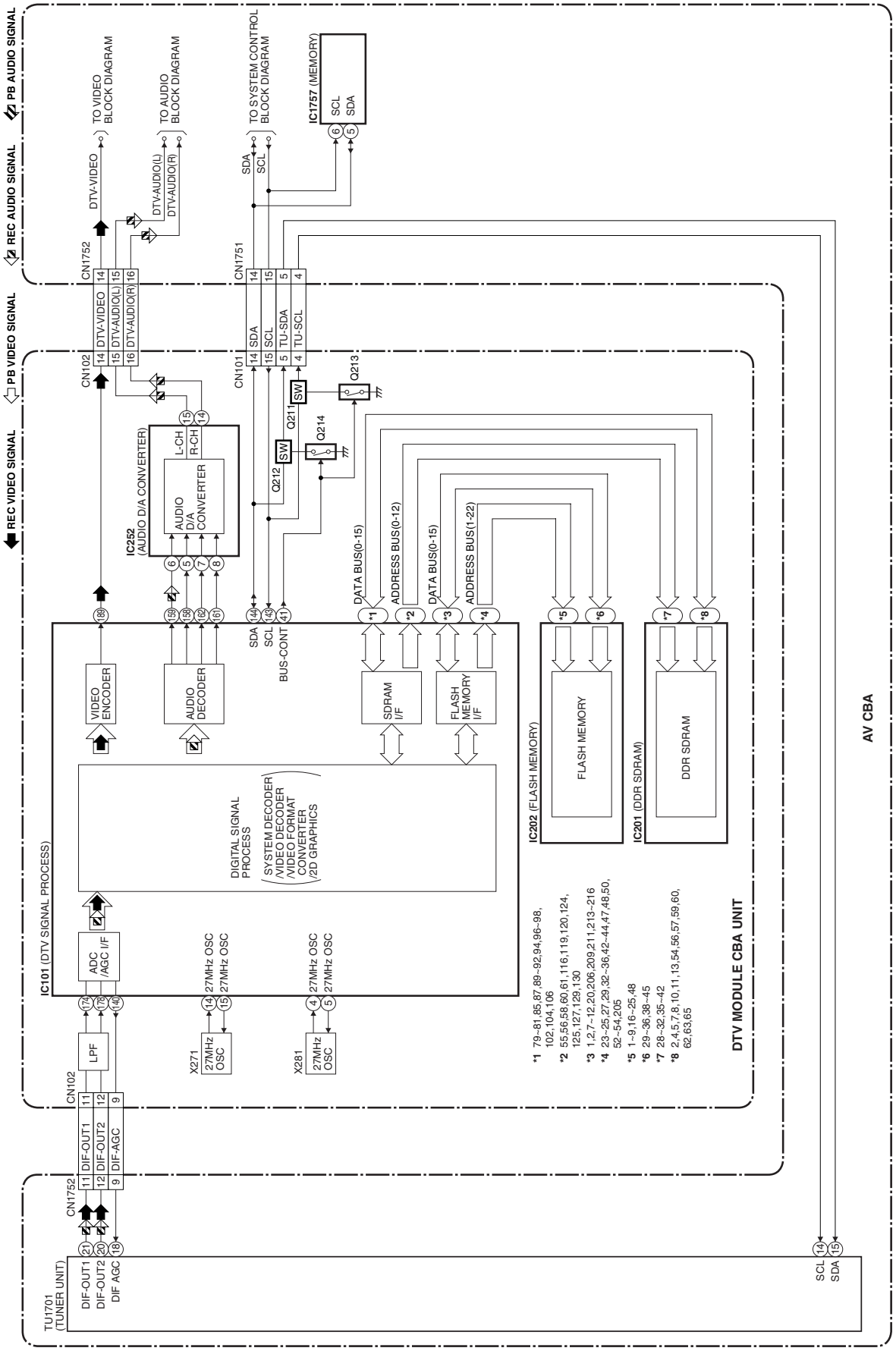


CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F2001) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

CAUTION !
For continued protection against fire hazard, replace only with the same type fuse.
ATTENTION : Pour une protection continue les risques d'Incele n'utiliser que des fusible de même type.
Risk of fire-replace fuse as marked.
"This symbol means fast operating fuse."
"Ce symbole représente un fusible à fusion rapide."

NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

DTV Module Block Diagram



SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

Standard Notes

WARNING

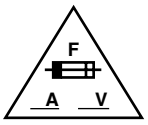
Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark "⚠" in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

Notes:

1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. All resistance values are indicated in ohms ($K = 10^3$, $M = 10^6$).
3. Resistor wattages are 1/4W or 1/6W unless otherwise specified.
4. All capacitance values are indicated in μF ($P = 10^{-6}$ μF).
5. All voltages are DC voltages unless otherwise specified.

LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

1. CAUTION:



FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQES D'INCELE N'UTILISER QUE DES FUSIBLE DE MÊME TYPE.
RISK OF FIRE-REPLACE FUSE AS MARKED.

This symbol means fast operating fuse.
Ce symbole reprèsente un fusible à fusion rapide.

2. CAUTION:

Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F2001) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

3. Note:

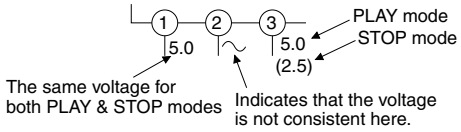
1. Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.
2. To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

4. Mode: SP/REC

5. Voltage indications for PLAY and REC modes on the schematics are as shown below:

< DVD/HDD Section >

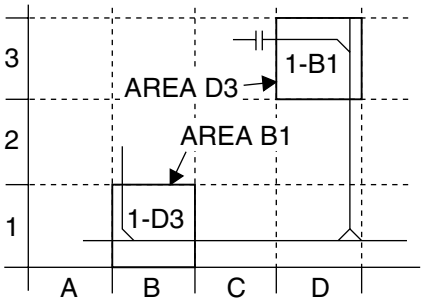
Unit: Volts



6. How to read converged lines

1-D3
- Distinction Area
- Line Number (1 to 3 digits)

Examples:
1. "1-D3" means that line number "1" goes to the line number "1" of the area "D3".
2. "1-B1" means that line number "1" goes to the line number "1" of the area "B1".



7. Test Point Information

: Indicates a test point with a jumper wire across a hole in the PCB.

: Used to indicate a test point with a component lead on foil side.

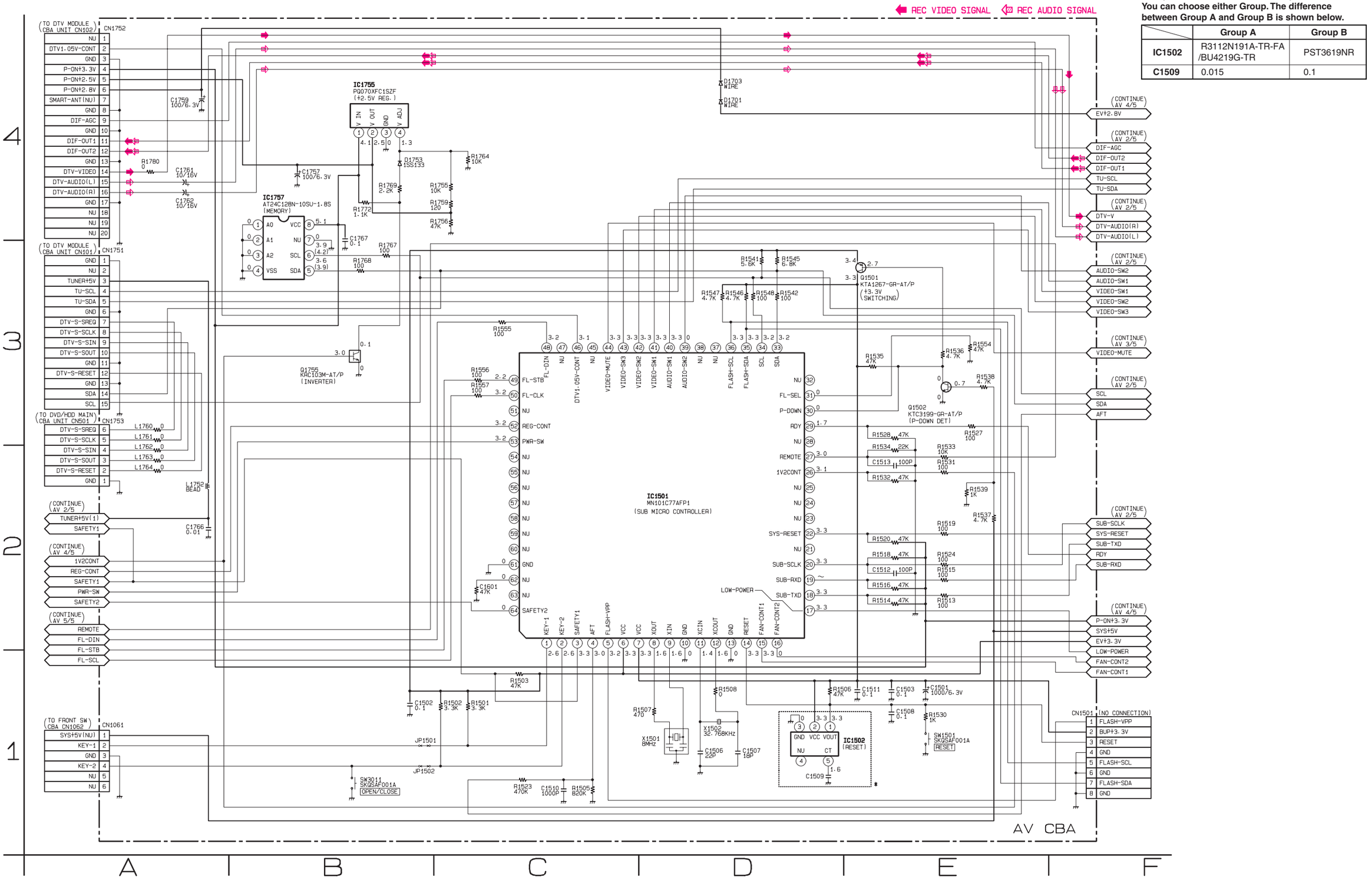
: Used to indicate a test point with no test pin.

: Used to indicate a test point with a test pin.

AV 1/5 Schematic Diagram

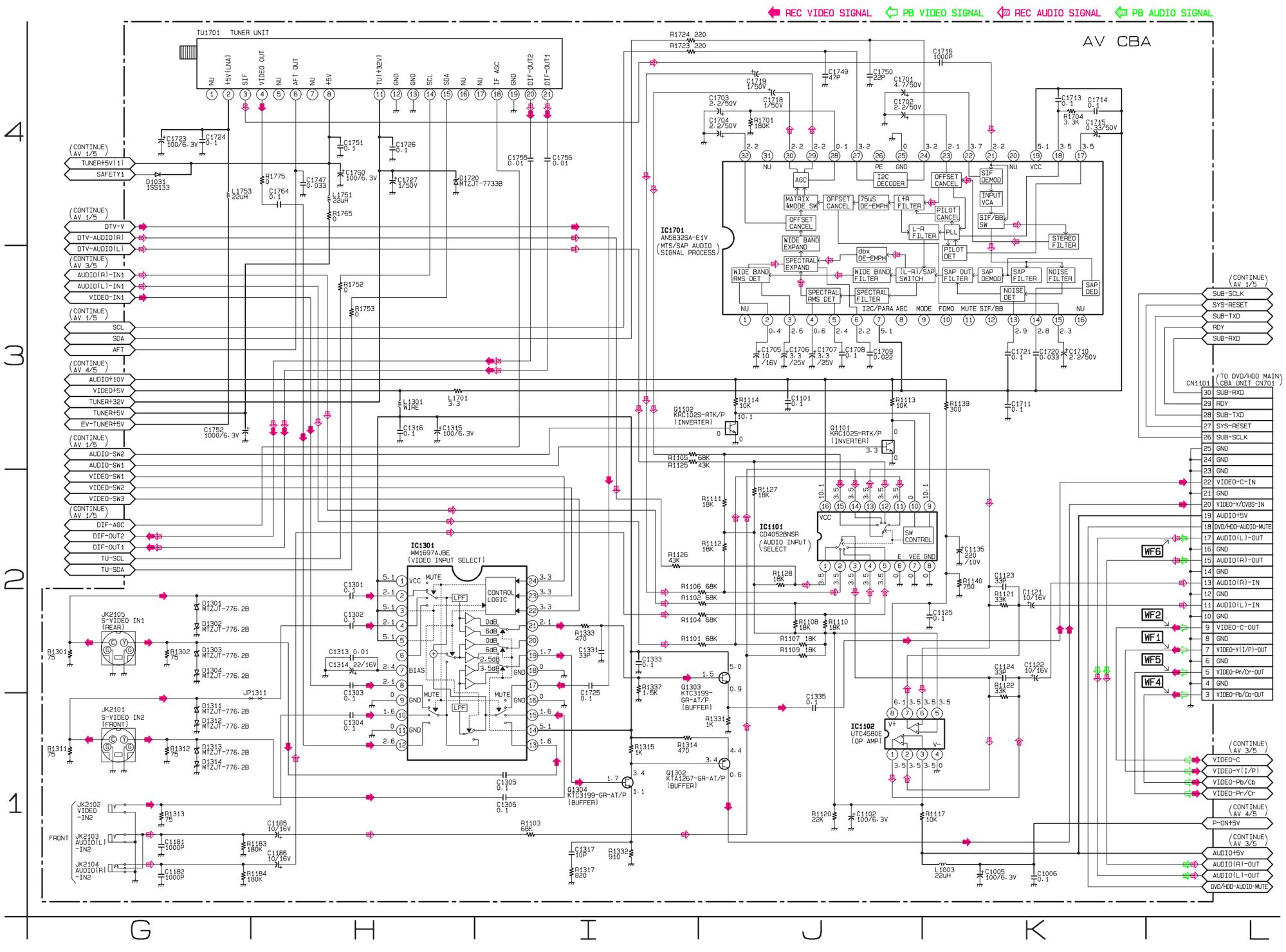
* NOTE
These components (IC1502, C1509) can be used in any models.
However, you cannot mix components under Group A with the ones under Group B.
You can choose either Group. The difference between Group A and Group B is shown below.

	Group A	Group B
IC1502	R3112N191A-TR-FA /BU4219G-TR	PST3619NR
C1509	0.015	0.1

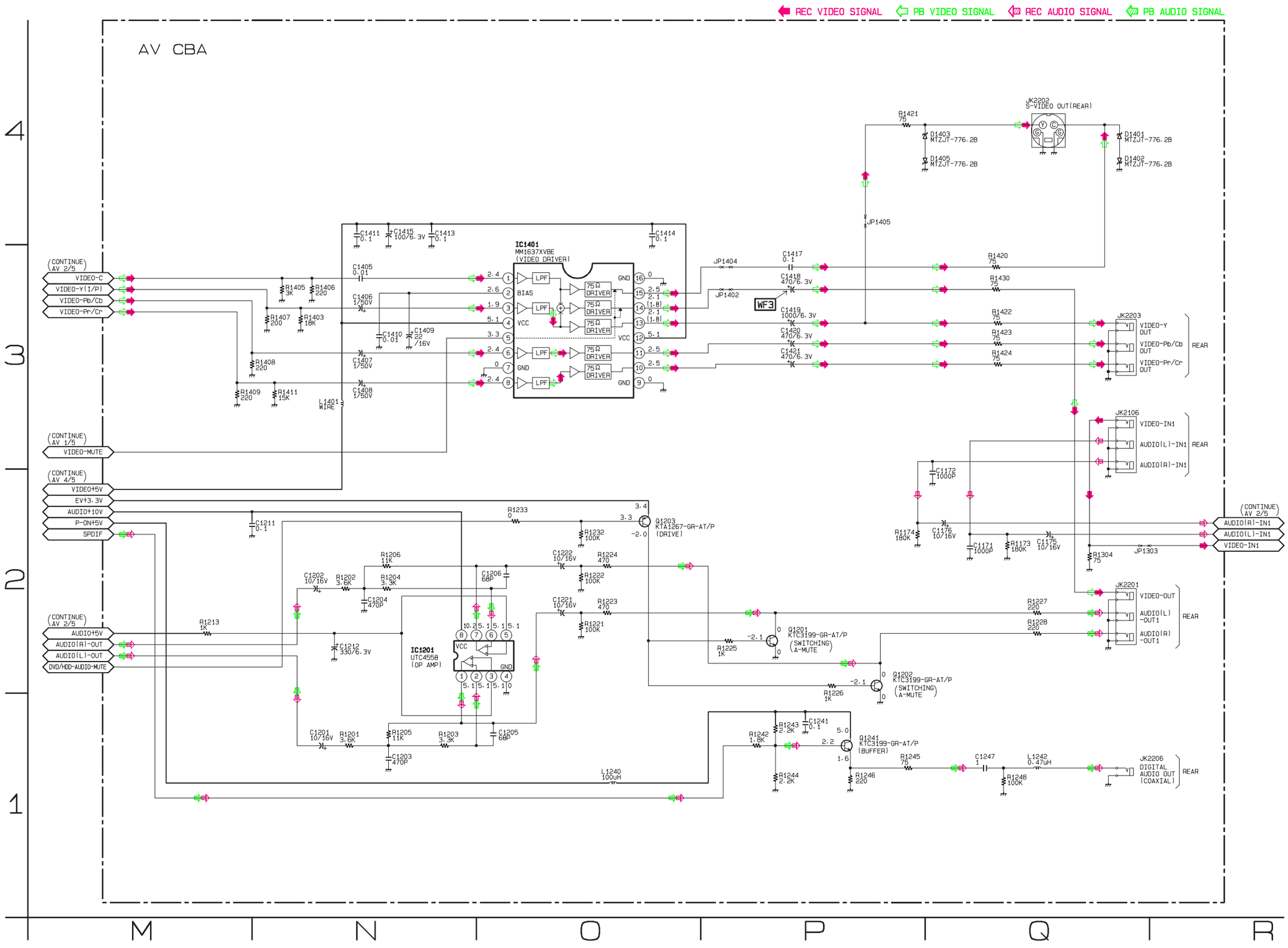


E2H00SCAV1

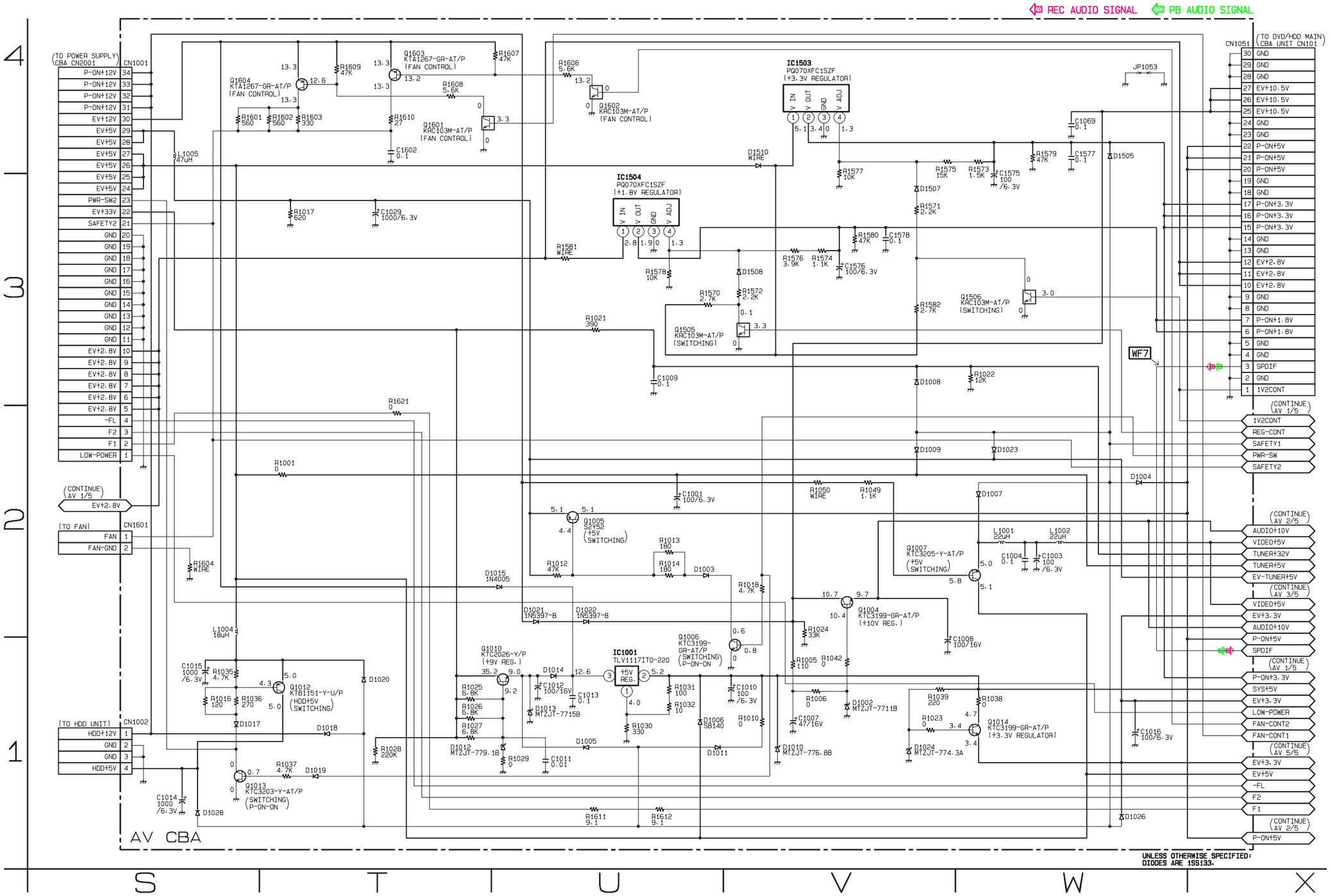
AV 2/5 Schematic Diagram



AV 3/5 Schematic Diagram



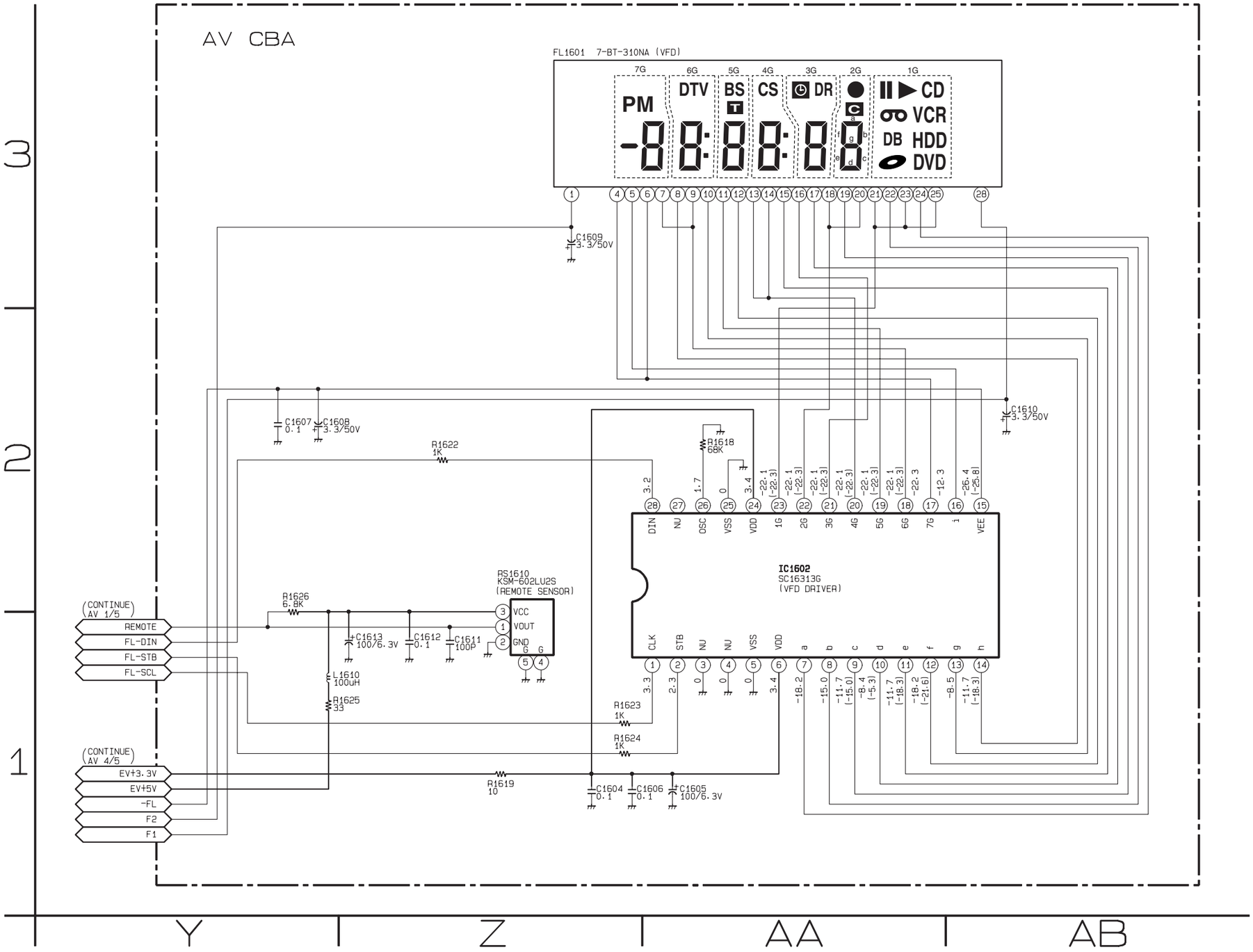
AV 4/5 Schematic Diagram



AV 5/5 Schematic Diagram

FL1601 MATRIX CHART

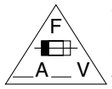
	7G	6G	5G	4G	3G	2G	1G
P1	a	a	a	a	a	a	CD
P2	b	b	b	b	b	b	∞
P3	f	f	f	f	f	f	VCR
P4	g	g	g	g	g	g	DB
P5	c	c	c	c	c	c	HDD
P6	e	e	e	e	e	e	◎
P7	d	d	d	d	d	d	DVD
P8	S1	:	T	:	◷	C	▶
P9	PM	DTV	BS	CS	DR	●	▮



E2H00SCAV5

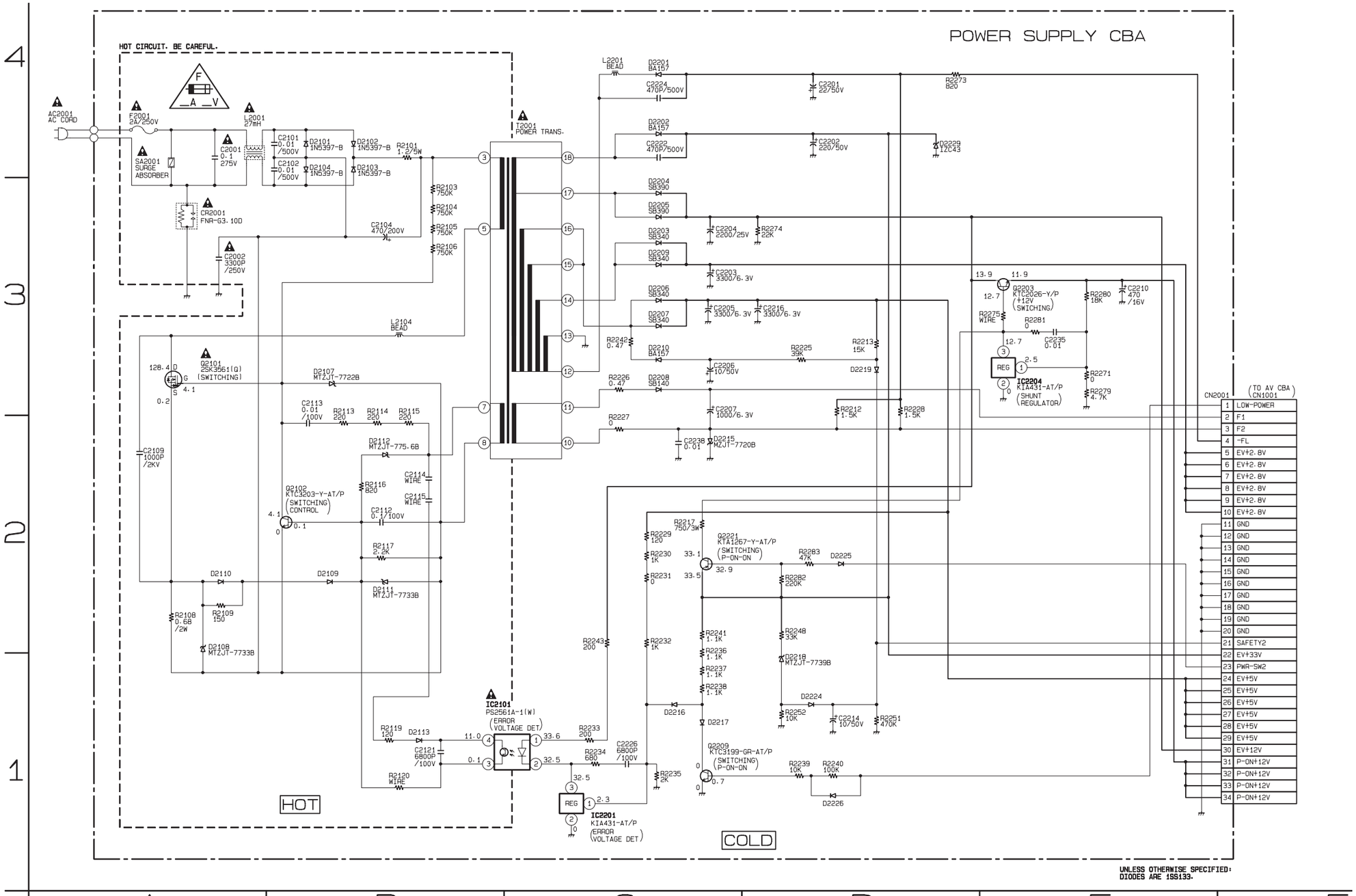
Power Supply Schematic Diagram

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F2001) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

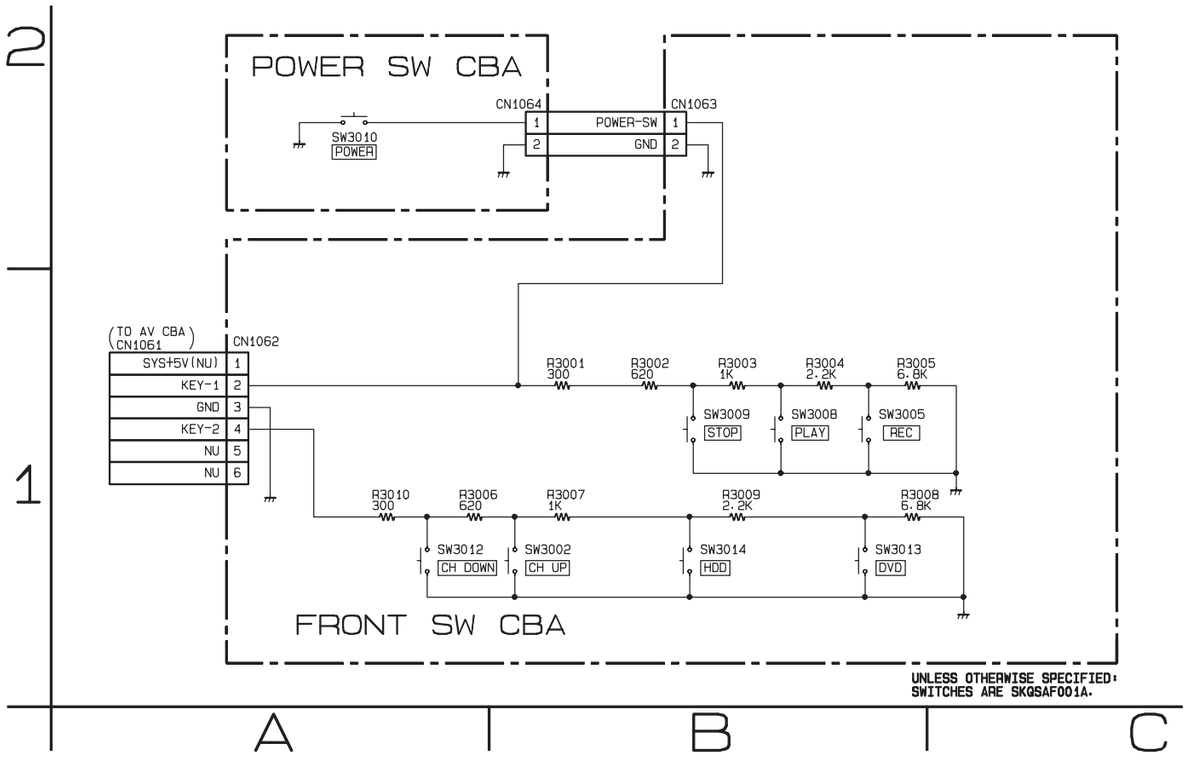


CAUTION !
For continued protection against fire hazard,
replace only with the same type fuse.
ATTENTION : Pour une protection continue les risqes
d'Incele n'utiliser que des fusible de même type.
Risk of fire-replace fuse as marked.
"This symbol means fast operating fuse."
"Ce symbole représente un fusible à fusion rapide."

NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

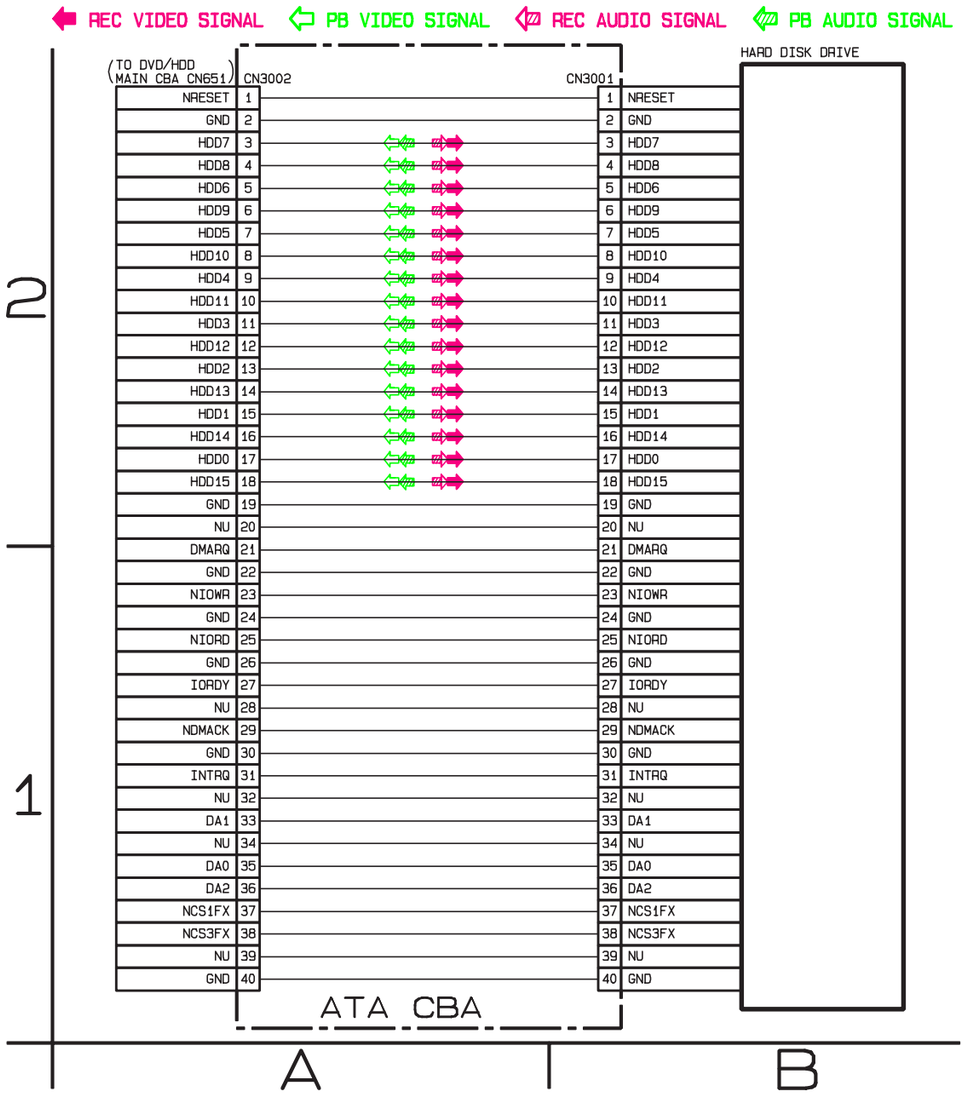


Front SW & Power SW Schematic Diagram



E2H00SCFSW

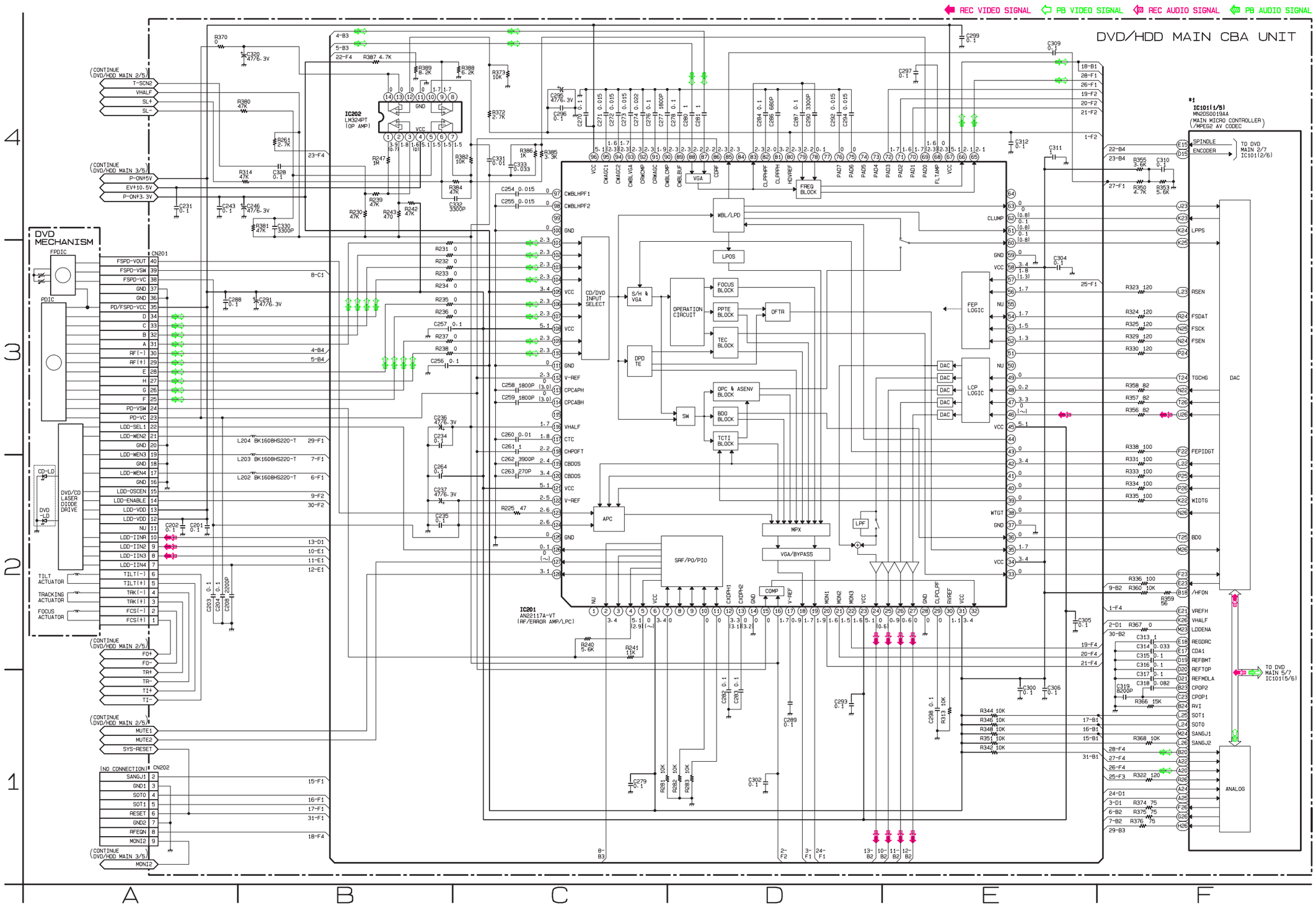
ATA Schematic Diagram


REC VIDEO SIGNAL
PB VIDEO SIGNAL
REC AUDIO SIGNAL
PB AUDIO SIGNAL
(TO DVD/HDD MAIN CBA CN651)
CN3002
CN3001
HARD DISK DRIVE
NRESET 1 — 1 NRESET
GND 2 — 2 GND
HDD7 3 — 3 HDD7
HDD8 4 — 4 HDD8
HDD6 5 — 5 HDD6
HDD9 6 — 6 HDD9
HDD5 7 — 7 HDD5
HDD10 8 — 8 HDD10
HDD4 9 — 9 HDD4
HDD11 10 — 10 HDD11
HDD3 11 — 11 HDD3
HDD12 12 — 12 HDD12
HDD2 13 — 13 HDD2
HDD13 14 — 14 HDD13
HDD1 15 — 15 HDD1
HDD14 16 — 16 HDD14
HDD0 17 — 17 HDD0
HDD15 18 — 18 HDD15
GND 19 — 19 GND
NU 20 — 20 NU
DMARQ 21 — 21 DMARQ
GND 22 — 22 GND
NIOWR 23 — 23 NIOWR
GND 24 — 24 GND
NIORD 25 — 25 NIORD
GND 26 — 26 GND
IORDY 27 — 27 IORDY
NU 28 — 28 NU
NDMACK 29 — 29 NDMACK
GND 30 — 30 GND
INTRQ 31 — 31 INTRQ
NU 32 — 32 NU
DA1 33 — 33 DA1
NU 34 — 34 NU
DA0 35 — 35 DA0
DA2 36 — 36 DA2
NCS1FX 37 — 37 NCS1FX
NCS3FX 38 — 38 NCS3FX
NU 39 — 39 NU
GND 40 — 40 GND
ATA CBA
2
1
A
B

E2H00SCATA

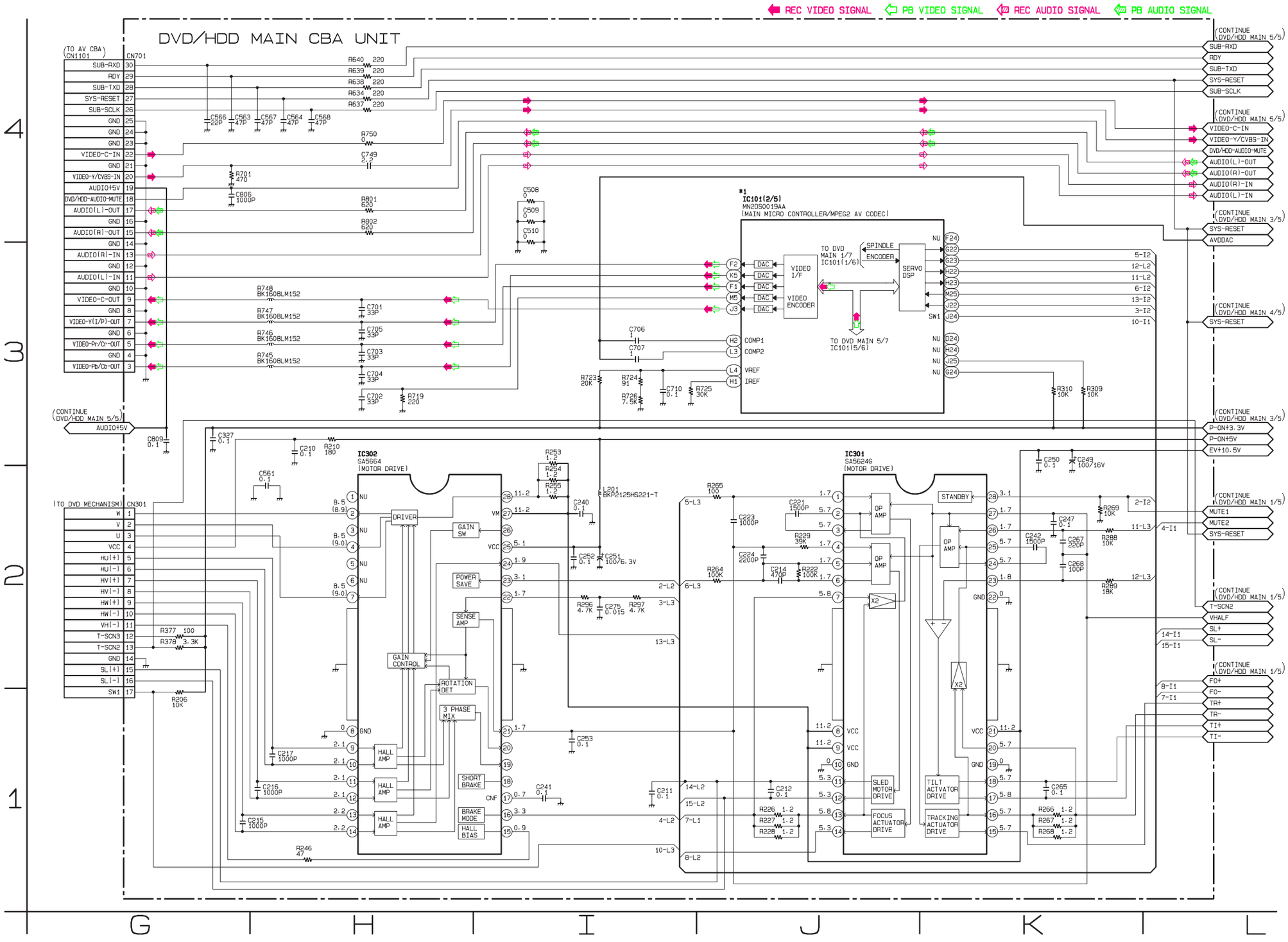
DVD/HDD Main 1/5 Schematic Diagram

∗1 **NOTE:**
The order of pins shown in this diagram is different from that of actual IC101.
IC101 is divided into five and shown as IC101 (1/5) ~ IC101 (5/5) in this DVD/HDD Main Schematic Diagram Section.



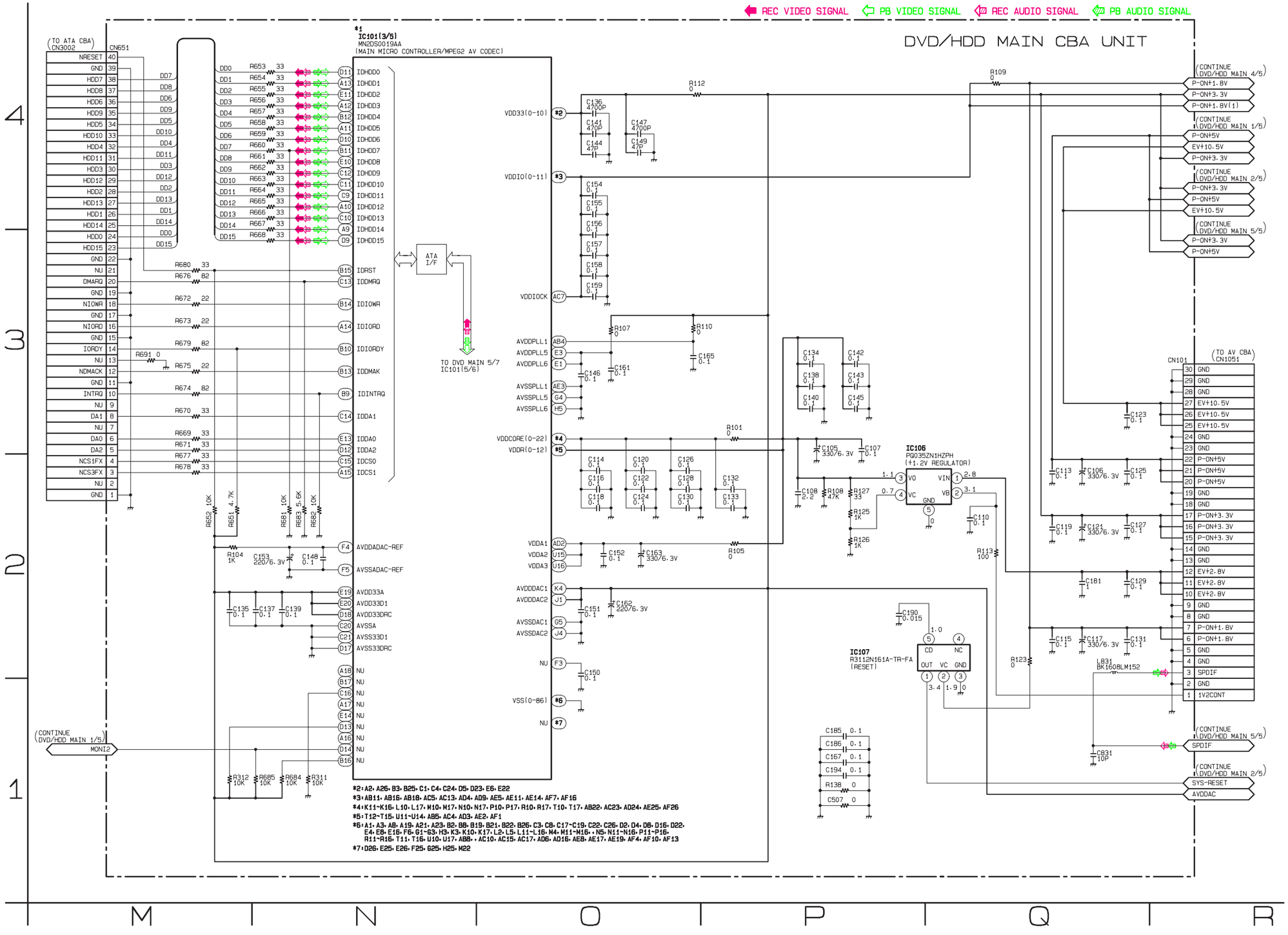
DVD/HDD Main 2/5 Schematic Diagram

∗1 **NOTE:**
The order of pins shown in this diagram is different from that of actual IC101.
IC101 is divided into five and shown as IC101 (1/5) ~ IC101 (5/5) in this DVD/HDD Main Schematic Diagram Section.



DVD/HDD Main 3/5 Schematic Diagram

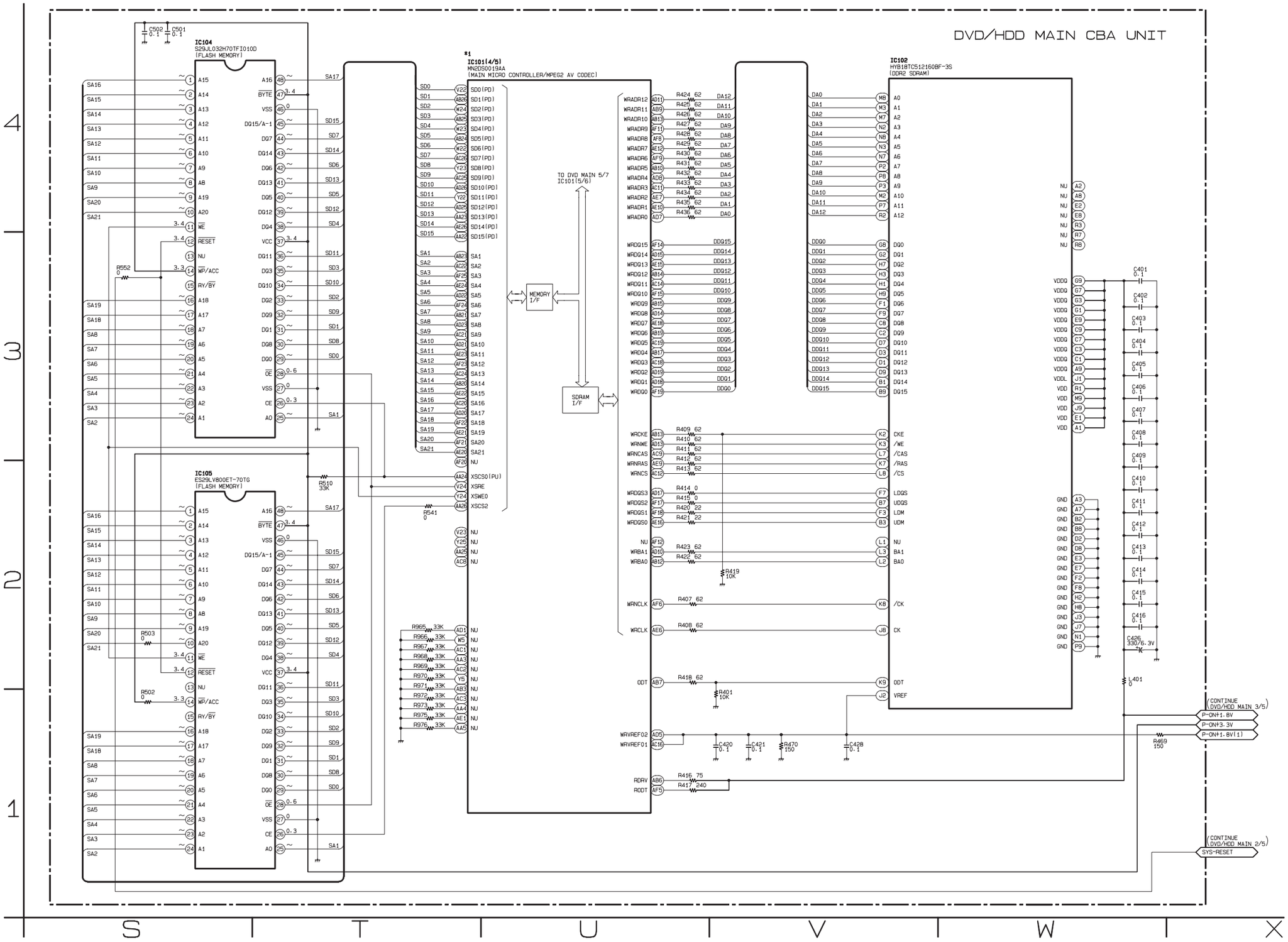
∗1 NOTE:
The order of pins shown in this diagram is different from that of actual IC101.
IC101 is divided into five and shown as IC101 (1/5) ~ IC101 (5/5) in this DVD/HDD Main Schematic Diagram Section.


REC VIDEO SIGNAL
PB VIDEO SIGNAL
REC AUDIO SIGNAL
PB AUDIO SIGNAL
DVD/HDD MAIN CBA UNIT
∗1
IC101(3/5)
MN2DS0019AA
(MAIN MICRO CONTROLLER/MPEG2 AV CODEC)
(TO ATA CBA) CN3002
CN651
IC105
PQ033ZN1HZPH
(+1.2V REGULATOR)
IC106
R3112N161A-TR-FA
(RESET)
ATA I/F
TO DVD MAIN 5/7 IC101(5/6)
(CONTINUE DVD/HDD MAIN 4/5)
(CONTINUE DVD/HDD MAIN 1/5)
(CONTINUE DVD/HDD MAIN 2/5)
(CONTINUE DVD/HDD MAIN 5/5)
(TO AV CBA) CN1051
(CONTINUE DVD/HDD MAIN 1/5)
(CONTINUE DVD/HDD MAIN 5/5)
(CONTINUE DVD/HDD MAIN 2/5)
∗2: A2, A26, B3, B25, C1, C4, C24, D5, D23, E6, E22
∗3: AB11, AB16, AB18, AC5, AC13, AD4, AD9, AE5, AE11, AE14, AF7, AF16
∗4: K11~K16, L10, L17, M10, M17, N10, N17, P10, P17, R10, R17, T10, T17, AB22, AC23, AD24, AE25, AF26
∗5: T12~T15, U11~U14, AB5, AC4, AD3, AE2, AF1
∗6: A1, A3, A8, A19, A21, A23, B2, B8, B19, B21, B22, B26, C3, C8, C17~C19, C22, C25, D2, D4, D8, D16, D22, E4, E8, E16, F6, G1~G3, H3, K3, K10, K17, L2, L5, L11~L16, M4, M11~M16, N5, N11~N16, P11~P16, R11~R15, T11, T15, U10, U17, AB8, , AC10, AC15, AC17, AD6, AD16, AE8, AE17, AE19, AF4, AF10, AF13
∗7: D26, E25, E26, F25, G25, H25, M22

DVD/HDD Main 4/5 Schematic Diagram

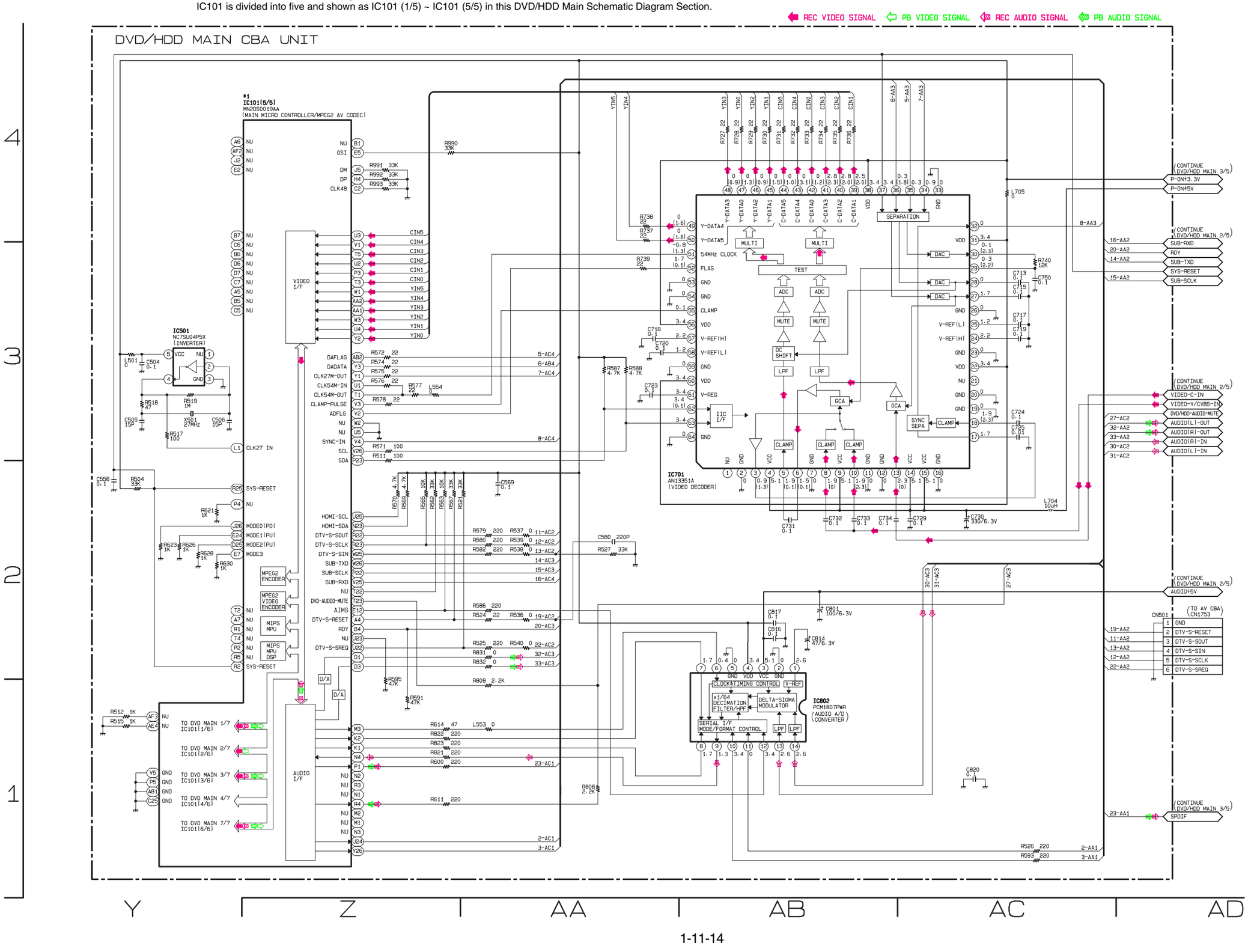
∗1 NOTE:

The order of pins shown in this diagram is different from that of actual IC101.
IC101 is divided into five and shown as IC101 (1/5) ~ IC101 (5/5) in this DVD/HDD Main Schematic Diagram Section.

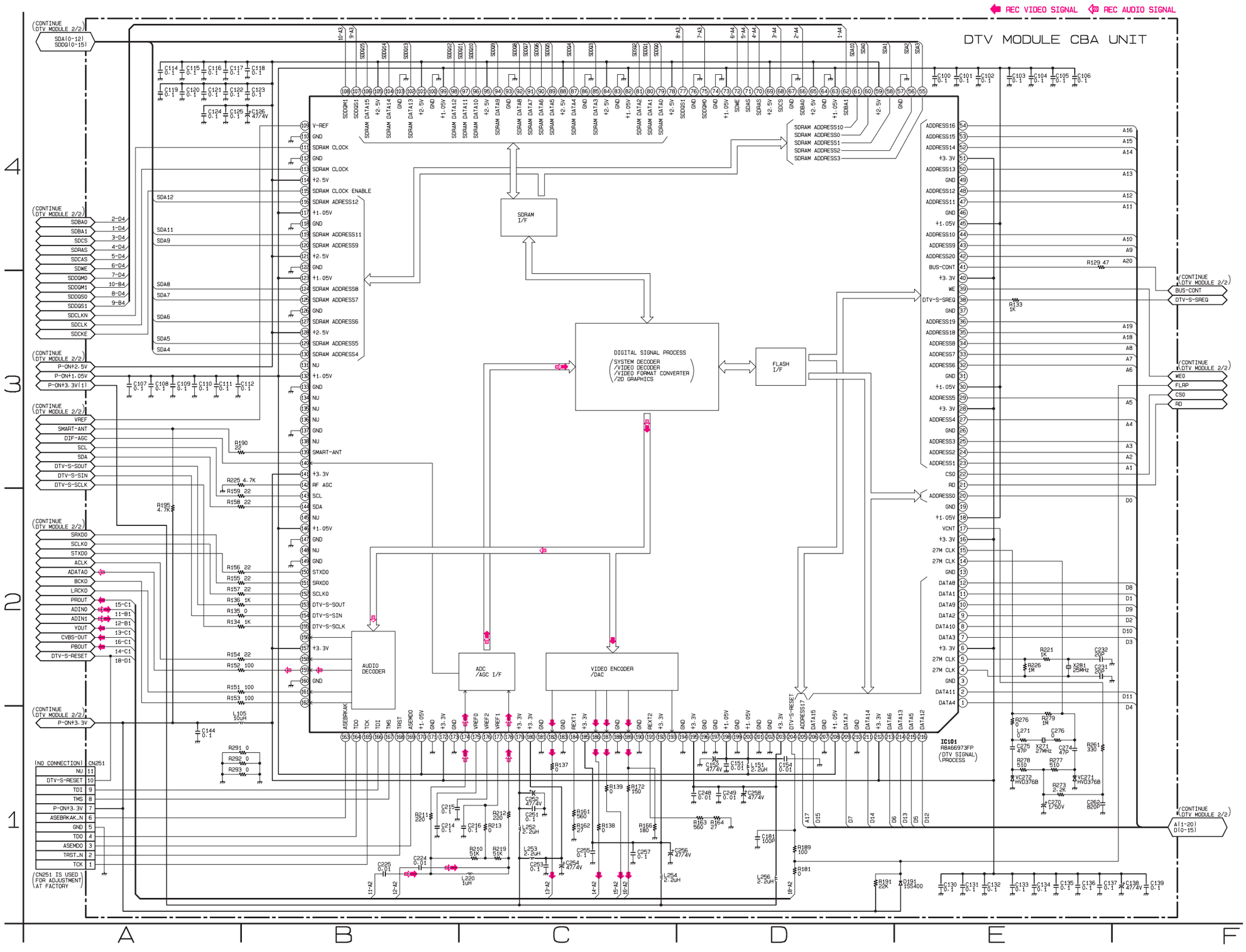


DVD/HDD Main 5/5 Schematic Diagram

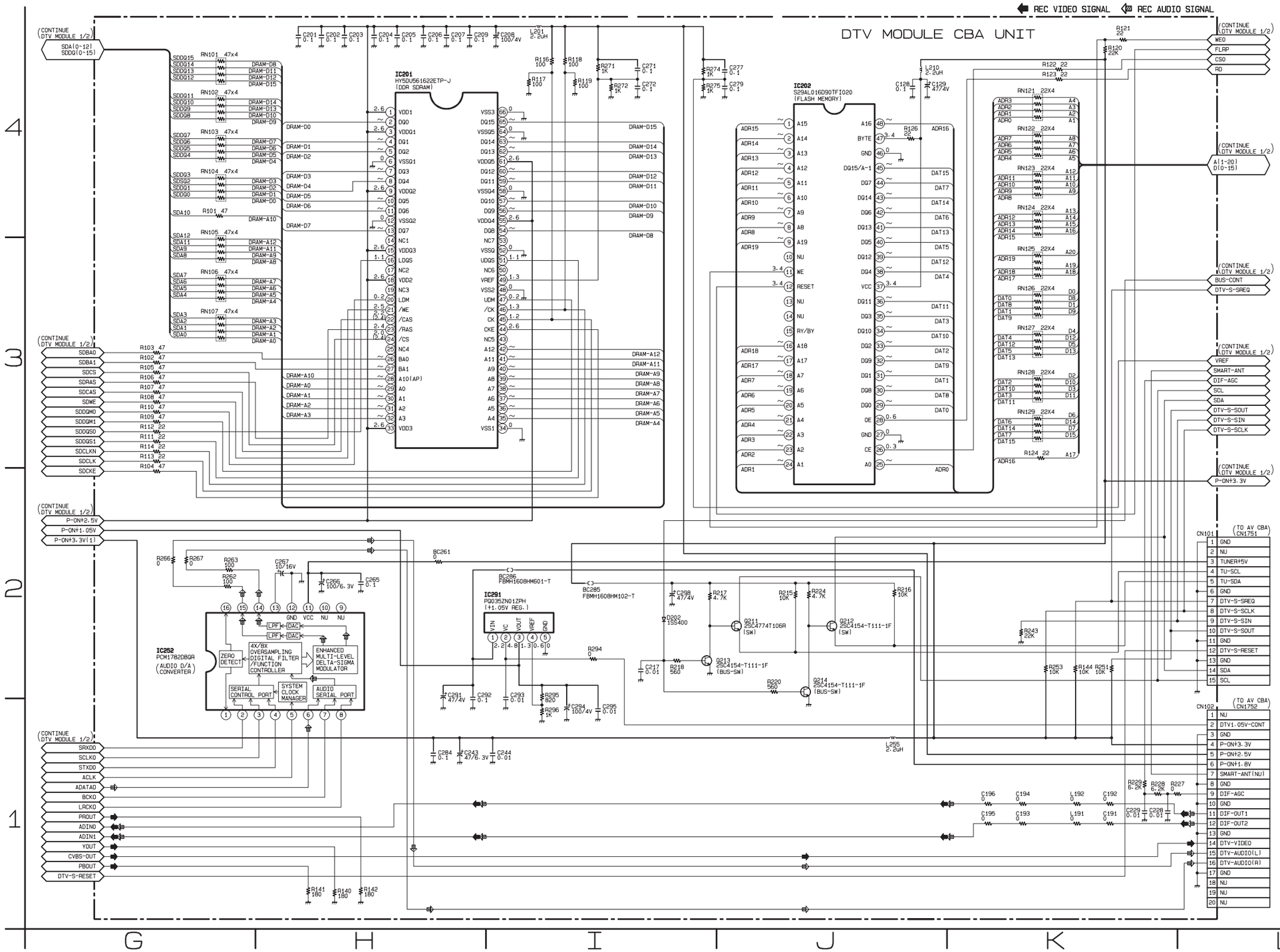
∗1 **NOTE:**
The order of pins shown in this diagram is different from that of actual IC101.
IC101 is divided into five and shown as IC101 (1/5) ~ IC101 (5/5) in this DVD/HDD Main Schematic Diagram Section.



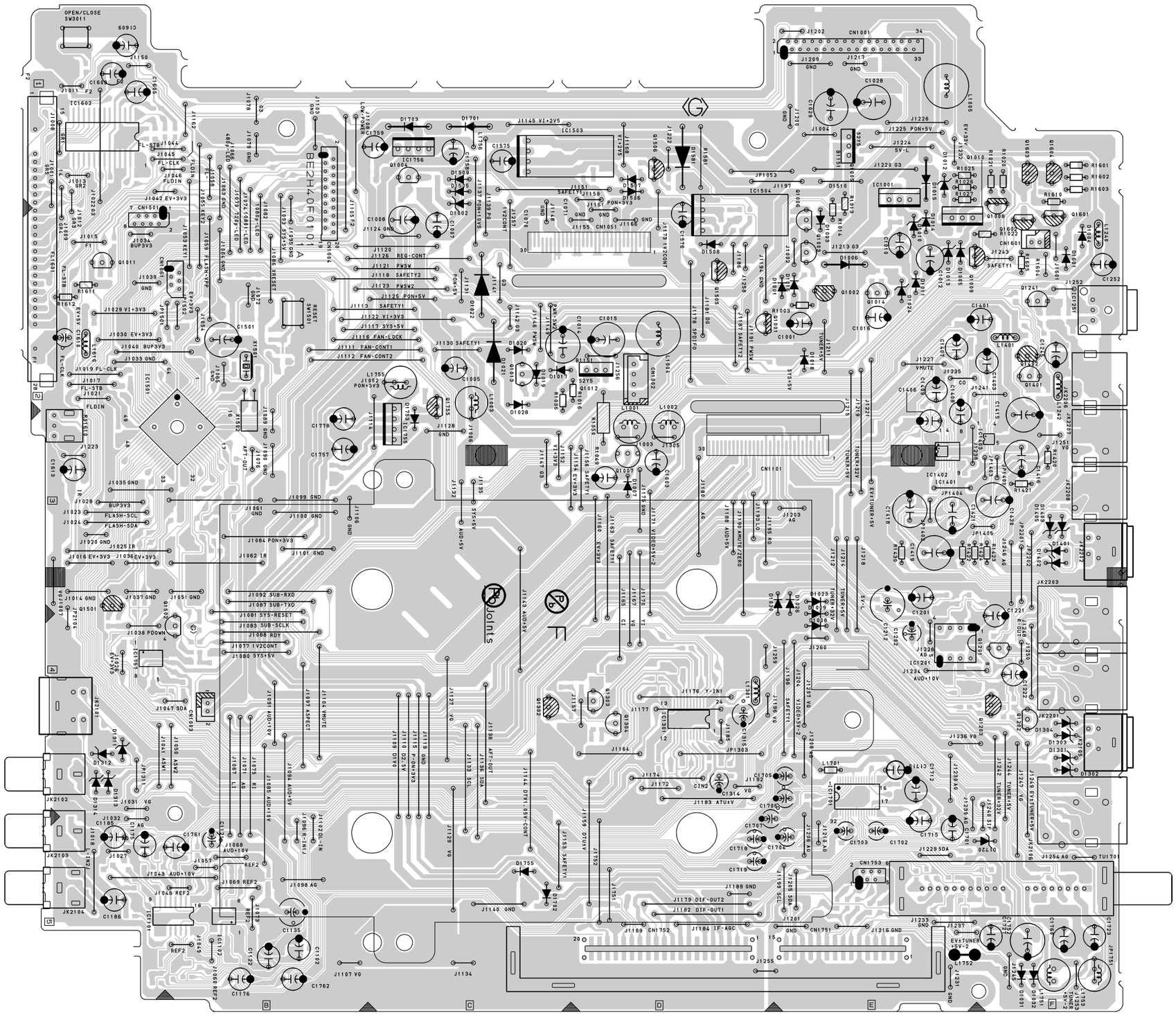
DTV Module 1/2 Schematic Diagram



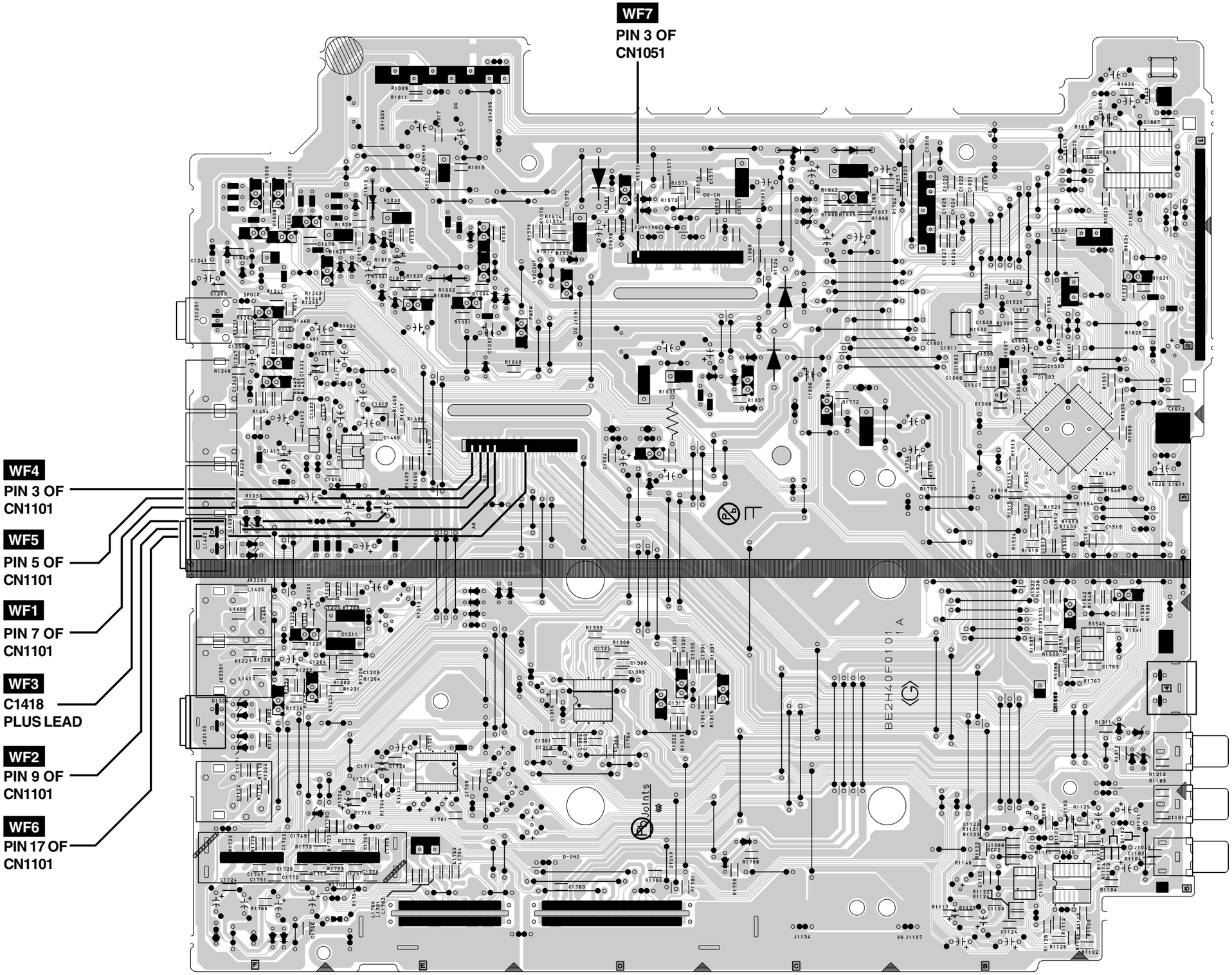
DTV Module 2/2 Schematic Diagram



AV CBA Top View



AV CBA Bottom View



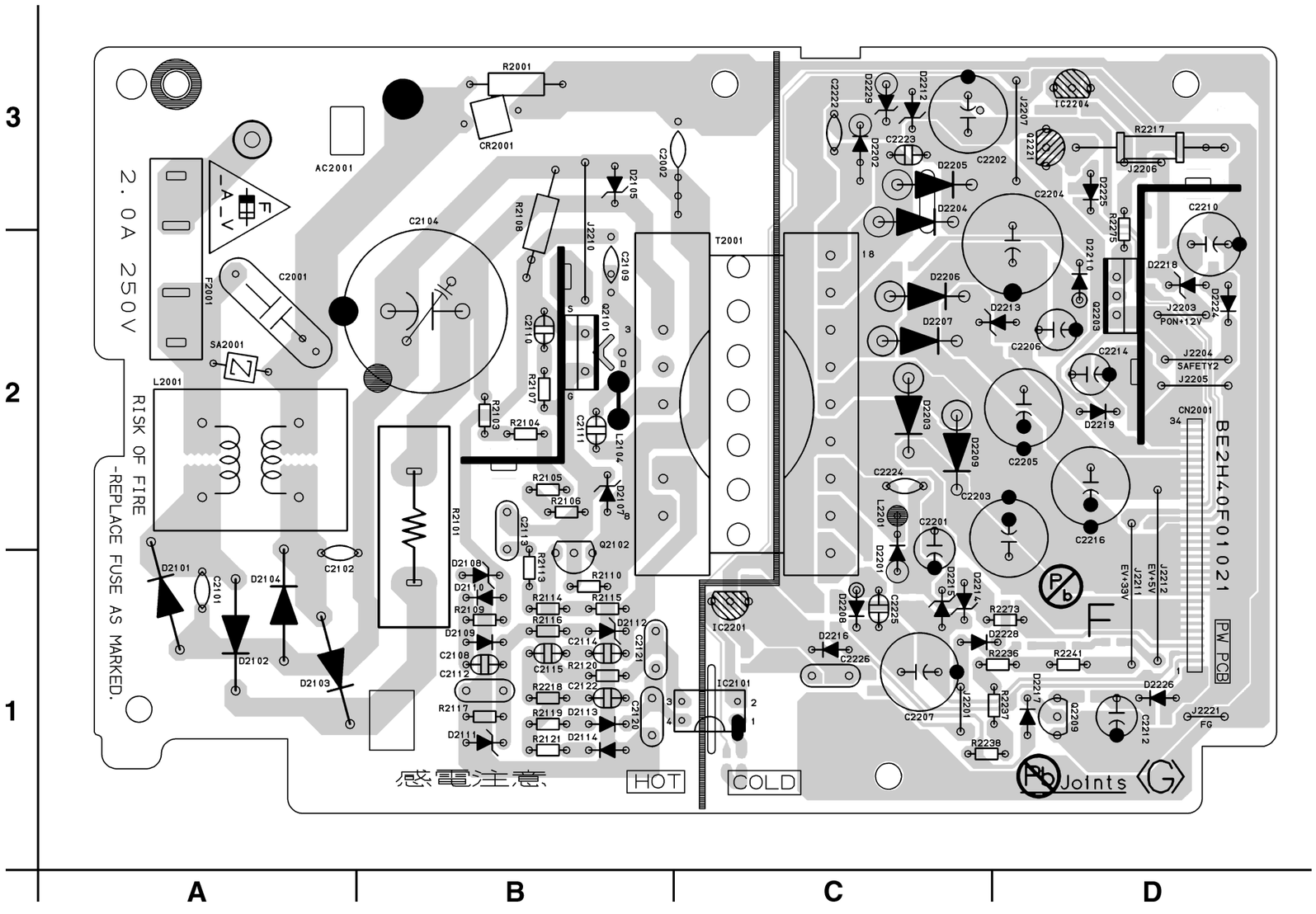
Power Supply CBA Top View

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F2001) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

CAUTION !
For continued protection against fire hazard,
replace only with the same type fuse.
ATTENTION : Pour une protection continue les risqes d'Incele n'utiliser que des fusible de même type.
Risk of fire-replace fuse as marked.
"This symbol means fast operating fuse."
"Ce symbole représente un fusible à fusion rapide."

Because a hot chassis ground is present in the power supply circut, an isolation transformer must be used. Also, in order to have the ability to increase the input slowly, when troubleshooting this type power supply circuit, a variable isolation transformer is required.

NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.



Power Supply CBA Bottom View

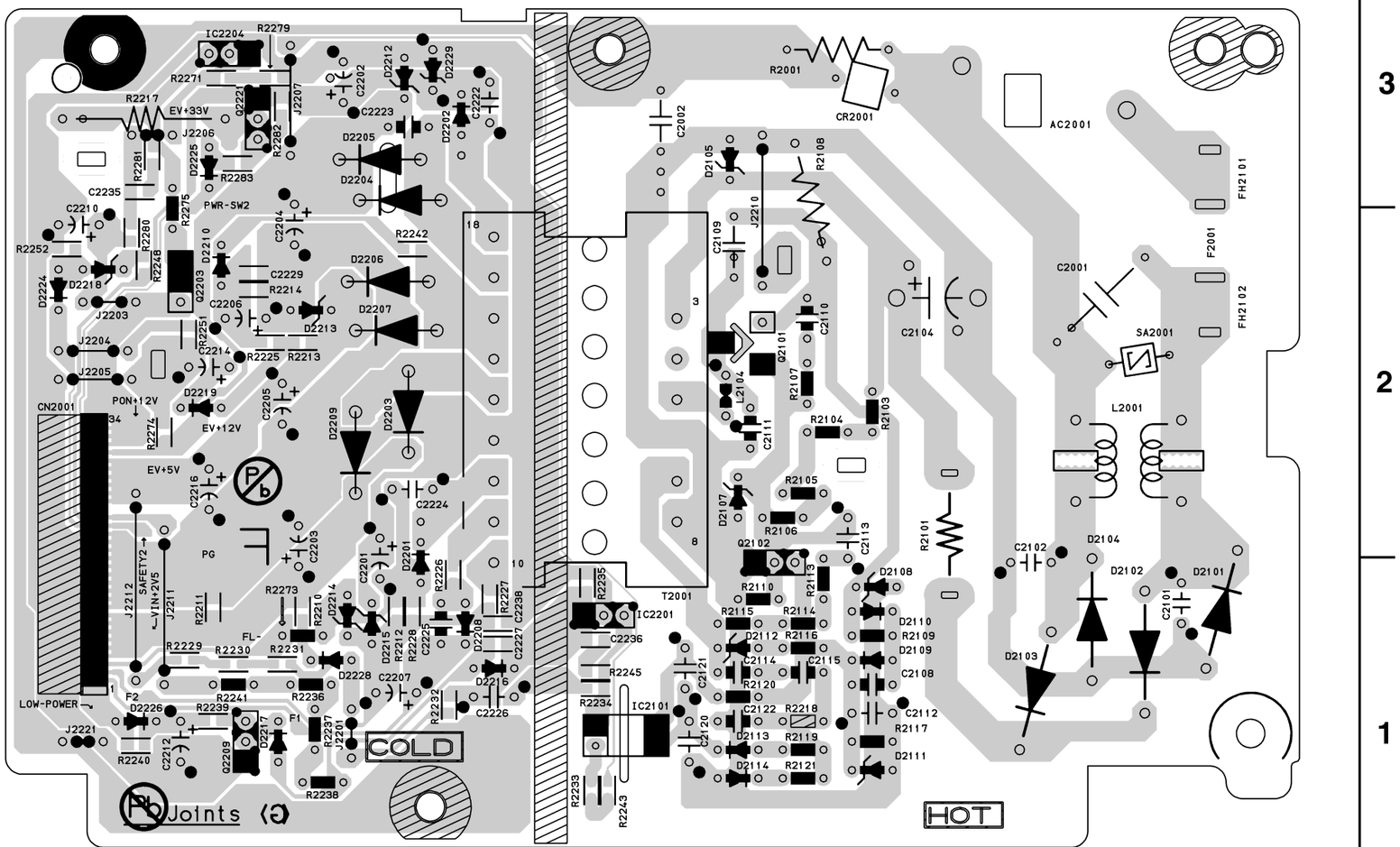
CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F2001) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

F
A V

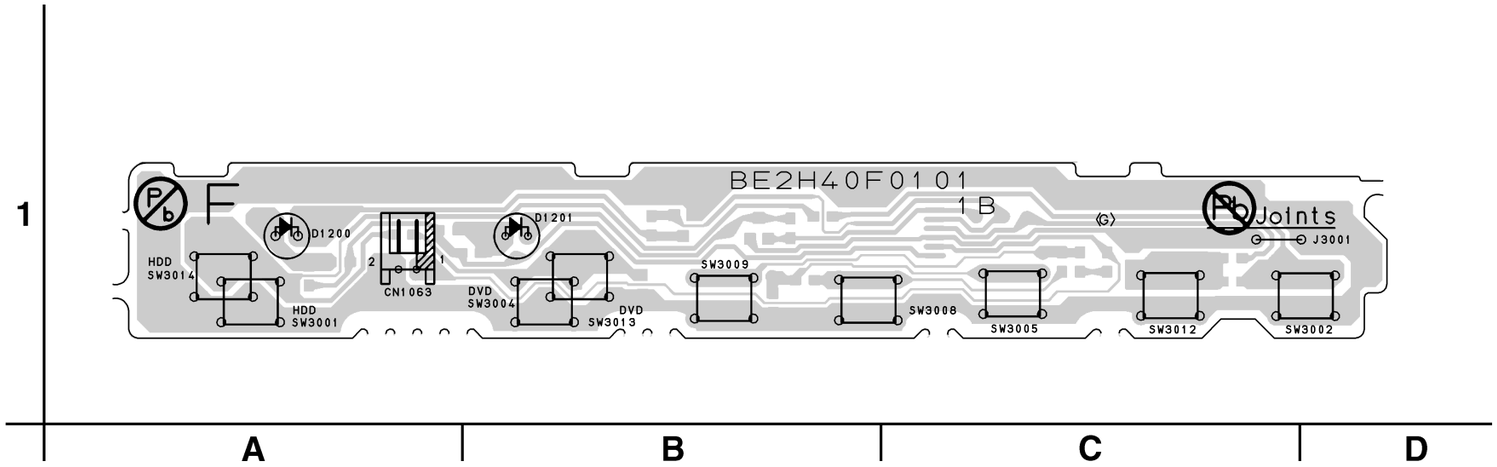
CAUTION !
For continued protection against fire hazard, replace only with the same type fuse.
ATTENTION : Pour une protection continue les risqes d'Incele n'utiliser que des fusible de même type.
Risk of fire-replace fuse as marked.
"This symbol means fast operating fuse."
"Ce symbole représente un fusible à fusion rapide."

Because a hot chassis ground is present in the power supply circut, an isolation transformer must be used. Also, in order to have the ability to increase the input slowly, when troubleshooting this type power supply circuit, a variable isolation transformer is required.

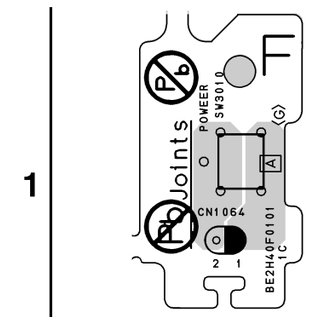
NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.



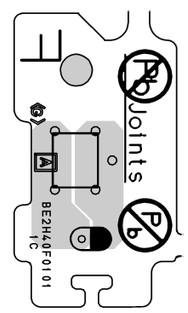
Front SW CBA Top View



Power SW CBA Top View

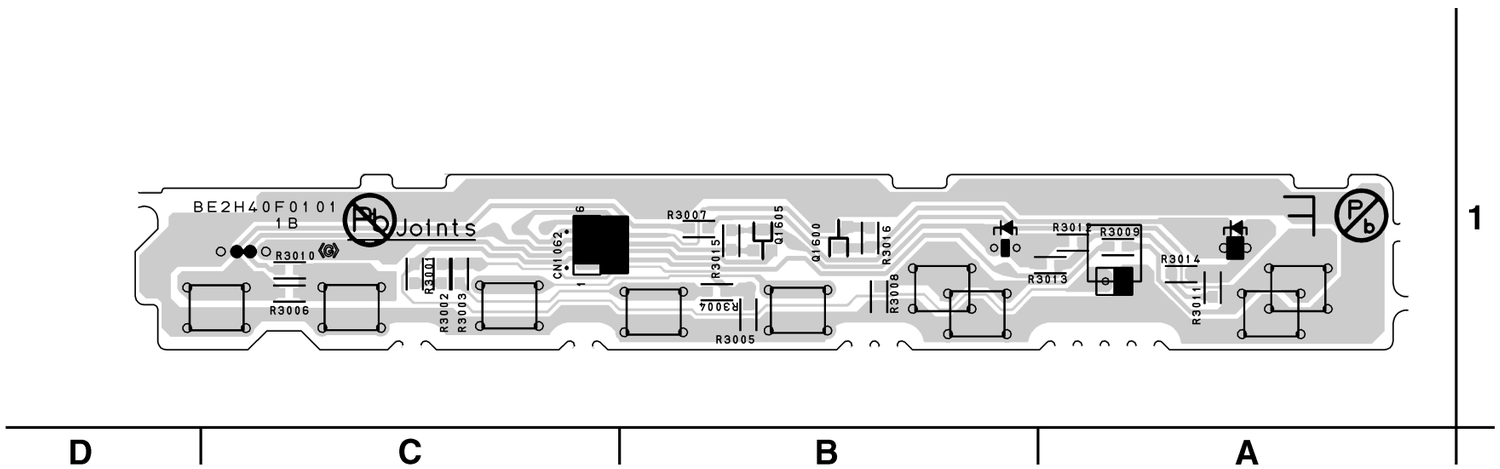


Power SW CBA Bottom View



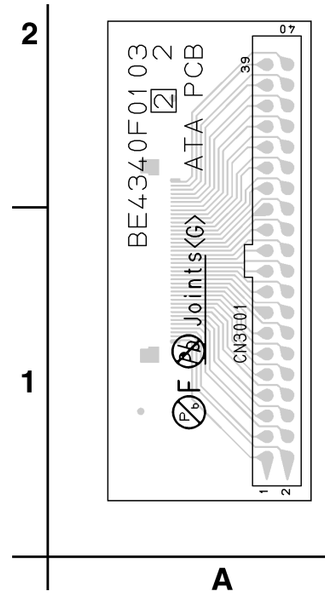
BE2H40F01011C

Front SW CBA Bottom View

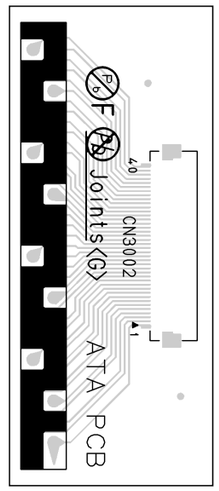


BE2H40F01011B

ATA CBA Top View



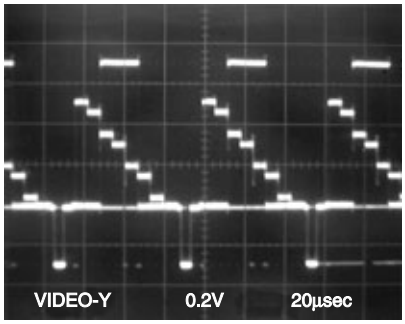
ATA CBA Bottom View



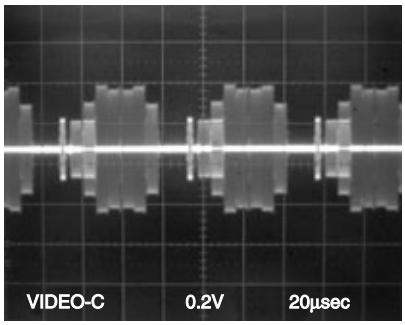
BE4340F01032

WAVEFORMS

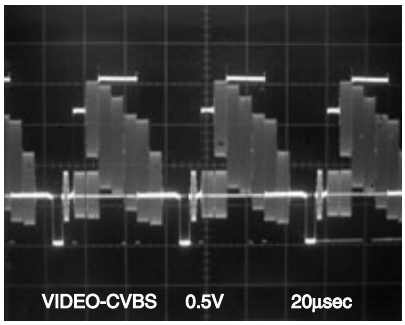
WF1 Pin 7 of CN1101



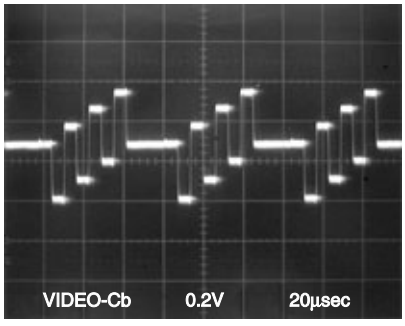
WF2 Pin 9 of CN1101



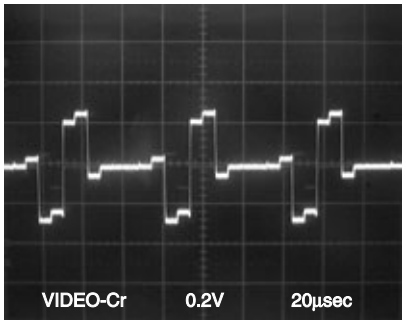
WF3 C1418 PLUS LEAD



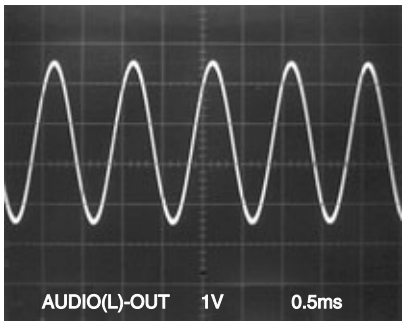
WF4 Pin 3 of CN1101



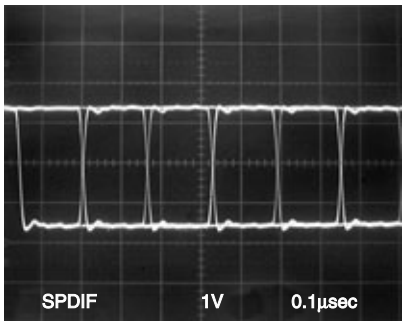
WF5 Pin 5 of CN1101



WF6 Pin 17 of CN1101



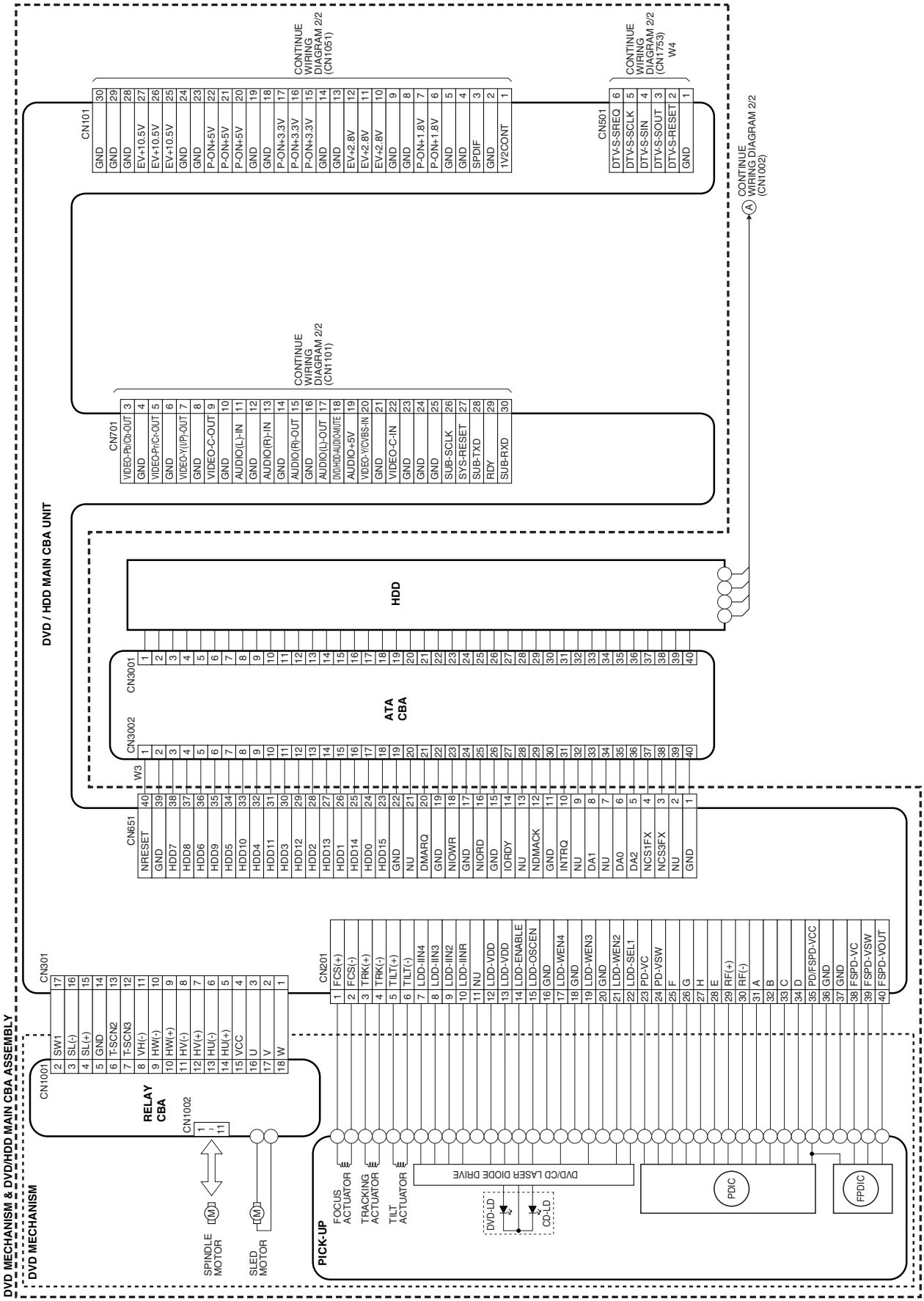
WF7 Pin 3 of CN1051



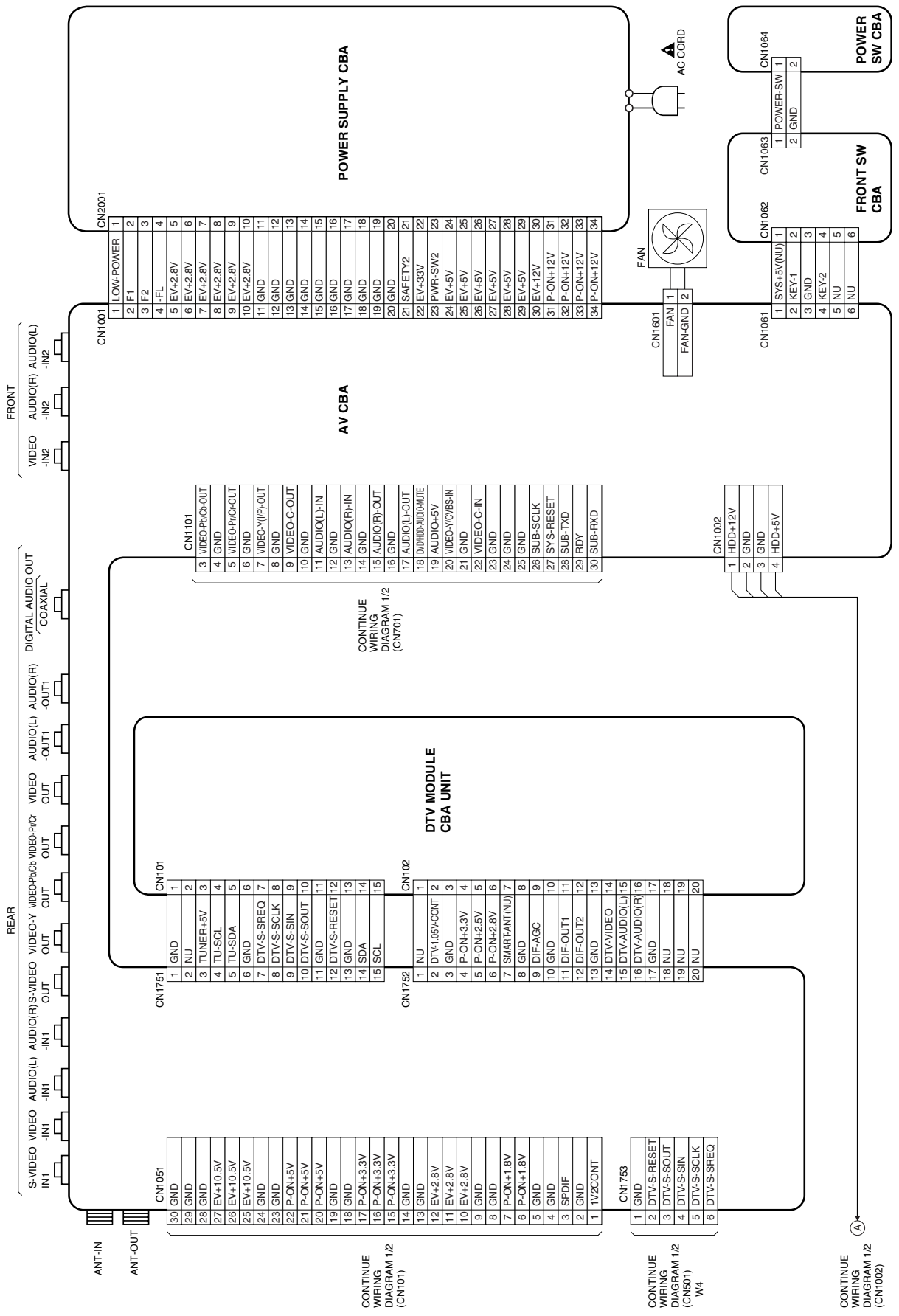
NOTE:
Input: COLOR BAR SIGNAL
(WITH 1KHz AUDIO SIGNAL)

WIRING DIAGRAM

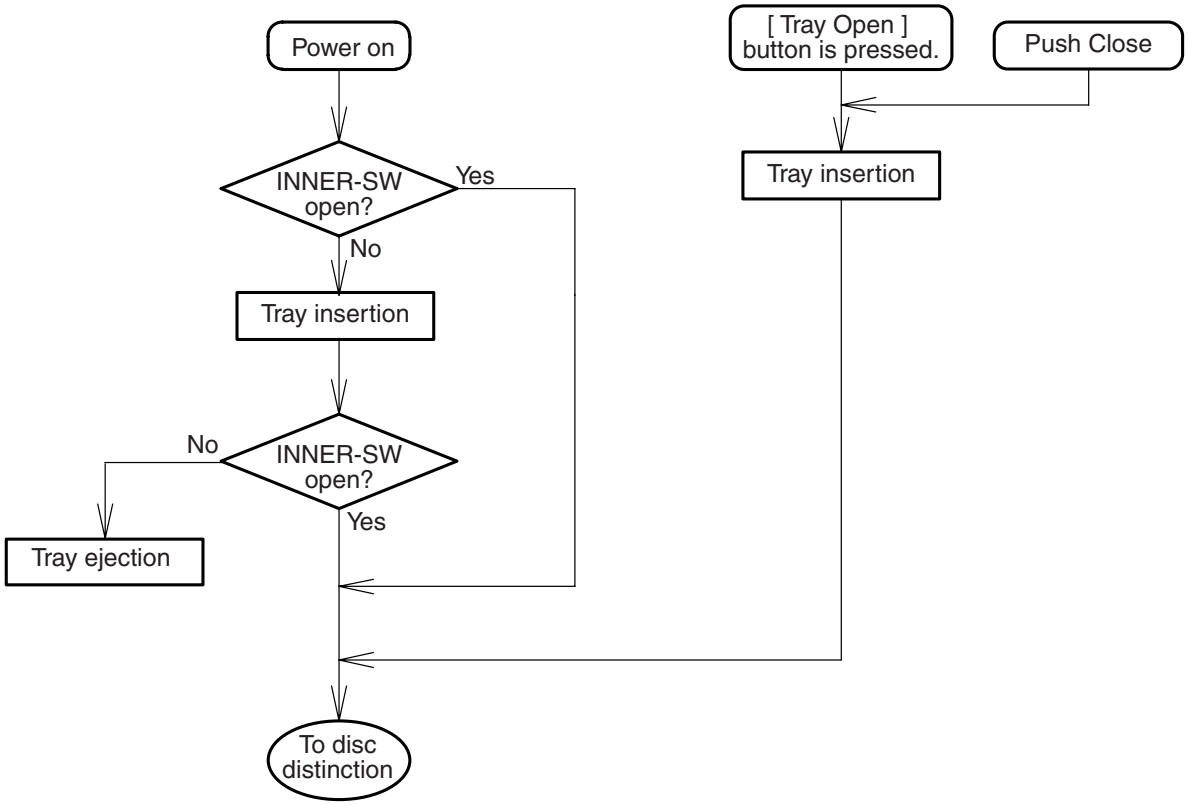
Wiring 1/2 Diagram

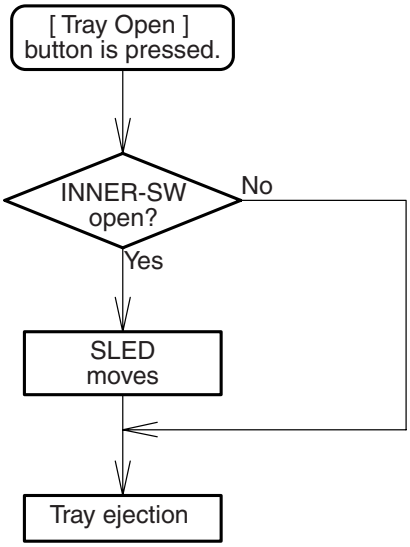


Wiring 2/2 Diagram



SYSTEM CONTROL TIMING CHARTS

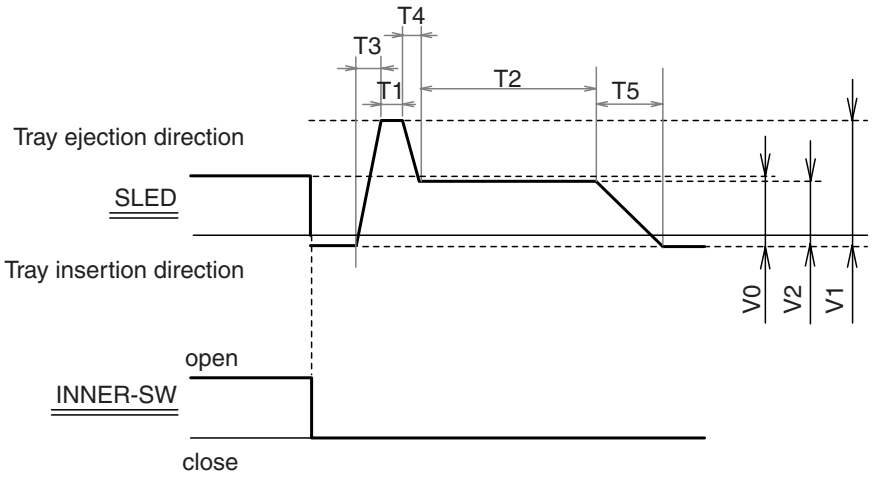




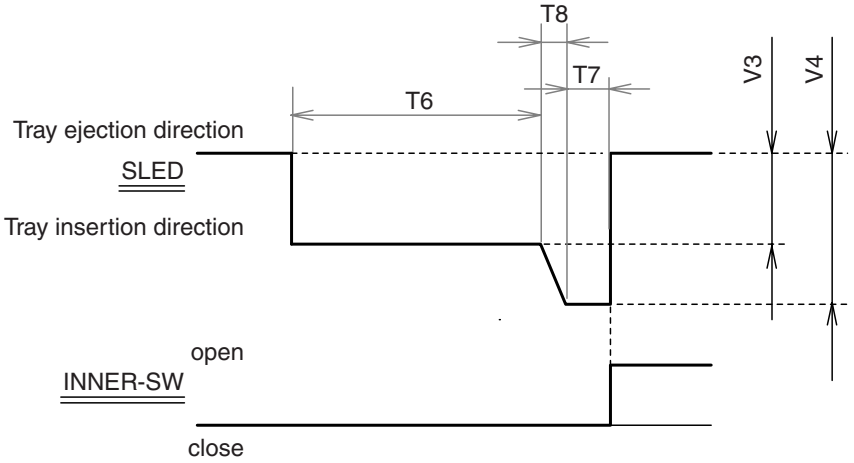
Parameter

V*: Voltage	T*: Event timer
V0: 2.40 V	T1: 0.050 s
V1: 4.25 V	T2: 2.000 s
V2: 2.00 V	T3: 0.008 s
V3: 2.36 V	T4: 0.006 s
V4: 4.26 V	T5: 0.066 s
	T6: 1.500 s
	T7: 0.800 s
	T8: 0.005 s

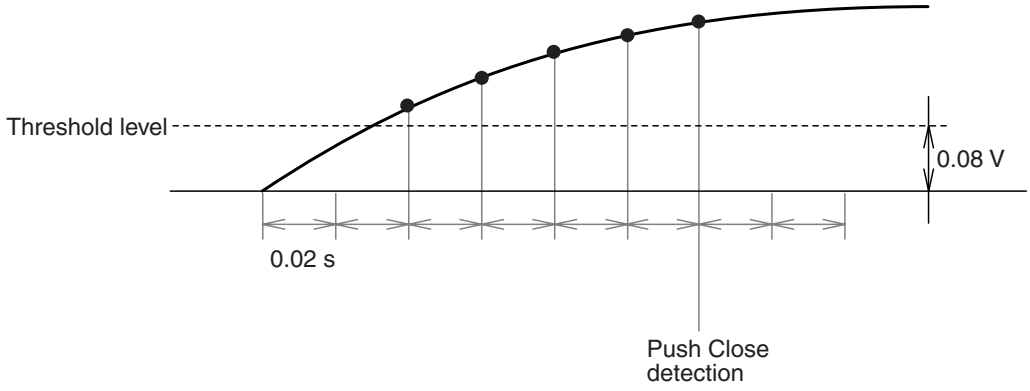
Tray open



Tray close



Push close



IC PIN FUNCTION DESCRIPTIONS

IC1501 (SUB MICROCONTROLLER)

Pin No.	IN/ OUT	Signal Name	Function
1	IN	KEY-1	Key Data Input 1
2	IN	KEY-2	Key Data Input 2
3	IN	SAFETY1	Power Supply Failure Detection 1
4	IN	AFT	Tuner Voltage Input Signal
5	-	FLASH-VPP	Flash Writing Voltage
6	IN	VCC	+3.3V Power Supply
7	IN	VCC	+3.3V Power Supply
8	OUT	XOUT	Main Clock Output
9	IN	XIN	Main Clock Input
10	-	GND	Ground
11	IN	XCIN	Sub Clock Input
12	OUT	XCOUT	Sub Clock Output
13	-	GND	Ground
14	IN	RESET	Micro Controller Reset Signal
15	OUT	FAN-CONT1	Fan Motor Control Signal 1
16	OUT	FAN-CONT2	Fan Motor Control Signal 2
17	OUT	LOW-POWER	Low Power Control Signal
18	OUT	SUB-TXD	Transmission Data to Main Micro Controller
19	IN	SUB-RXD	Reception Data from Main Micro Controller
20	OUT	SUB-SCLK	Communication Clock with Main Micro Controller
21	-	NU	Not Used
22	OUT	SYS-RESET	System Reset Signal
23	-	NU	Not Used
24	-	NU	Not Used
25	-	NU	Not Used
26	OUT	1V2CONT	Power Regulator Control Signal
27	IN	REMOTE	Remote Signal Input
28	-	NU	Not Used
29	IN	RDY	Ready/Busy communication Control with Main Micro Controller
30	IN	P-DOWN	Power Voltage Down Detector Signal
31	OUT	FL-SEL	FL Select (Low Level)
32	-	NU	Not Used
33	IN/ OUT	SDA	Serial Data
34	OUT	SCL	Serial Clock
35	IN/ OUT	FLASH-SDA	Serial Data Signal for Flash
36	OUT	FLASH-SCL	Serial Clock Signal for Flash
37	-	NU	Not Used
38	-	NU	Not Used
39	OUT	AUDIO-SW2	Audio Input Select Signal 2
40	OUT	AUDIO-SW1	Audio Input Select Signal 1
41	OUT	VIDEO-SW1	Video Input Select Signal 1
42	OUT	VIDEO-SW2	Video Input Select Signal 2
43	OUT	VIDEO-SW3	Video Input Select Signal 3
44	OUT	VIDEO-MUTE	Video Mute Control Signal
45	-	NU	Not Used
46	OUT	DTV1.05V-CONT	DTV1.05 Control Signal
47	-	NU	Not Used
48	OUT	FL-DIN	FL Serial Data
49	OUT	FL-STB	FL Serial Interface Strobe
50	OUT	FL-CLK	FL Serial Clock
51	-	NU	Not Used
52	OUT	REG-CONT	Power Regulator Control Signal
53	OUT	PWR-SW	Power On Signal Output
54	-	NU	Not Used
55	-	NU	Not Used
56	-	NU	Not Used
57	-	NU	Not Used
58	-	NU	Not Used
59	-	NU	Not Used
60	-	NU	Not Used
61	-	GND	Ground

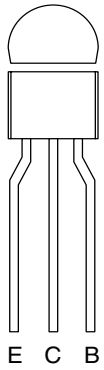
Pin No.	IN/ OUT	Signal Name	Function
62	-	NU	Not Used
63	-	NU	Not Used
64	-	SAFETY2	Power Supply Failure Detection 2

IC1602 (VFD DRIVER

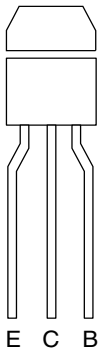
Pin No.	IN/ OUT	Signal Name	Function
1	IN	CLK	Serial Clock
2	IN	STB	Serial Interface Strobe
3	-	NU	Not Used
4	-	NU	Not Used
5	-	VSS	GND
6	-	VDD	Power Supply
7	OUT	a	Segment Output
8		b	
9		c	
10		d	
11		e	
12		f	
13		g	
14		h	
15	-	VEE	Pull Down Level
16	OUT	i	Segment Output
17	OUT	7G	Grid Output
18		6G	
19		5G	
20		4G	
21		3G	
22		2G	
23		1G	
24	-	VDD	Power Supply
25	-	VSS	GND
26	IN	OSC	Oscillator Input
27	-	NU	Not Used
28	IN	DIN	Serial Data Input

LEAD IDENTIFICATIONS

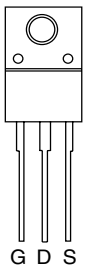
KTC3203-Y-AT/P
KTC3205-Y-AT/P



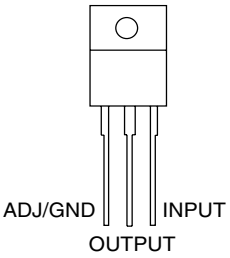
KRC103M-AT/P
KTA1267-(GR,Y)-AT/P
KTC3199-(BL,GR,Y)-AT/P



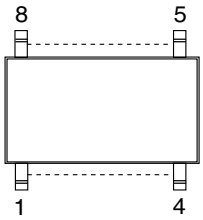
2SK3561(Q)



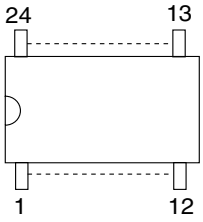
TLV1117I TO-220



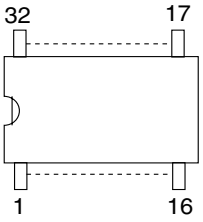
UTC4580E



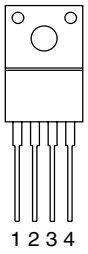
MM1697AJBE



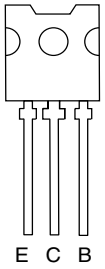
AN5832SA-E1V



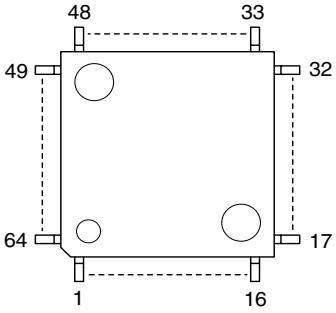
PQ070XF01SZH



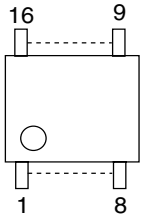
KTB1151-Y-U/P



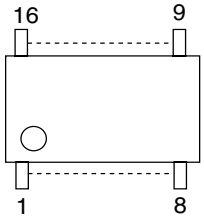
MN101C77AFP1



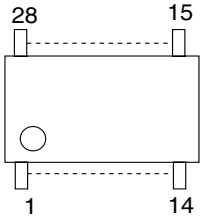
MM1637XVBE



CD4052BNSR



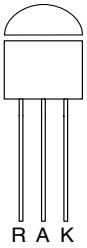
SC16313G



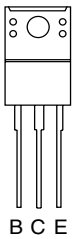
PS2561A-1(W)

1: Anode
2: Cathode
3: Emitter
4: Collector

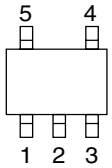
KIA431-AT/P



KTC2026-Y/P

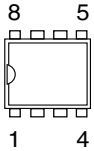


BU4219G-TR
R3112N191A-TR-FA
PST3619NR

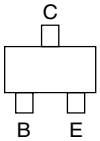


Note:
A: Anode
K: Cathode
E: Emitter
C: Collector
B: Base
R: Reference
G: Gate
D: Drain
S: Source

UTC4558
AT24C128N-10SU-1.8 S

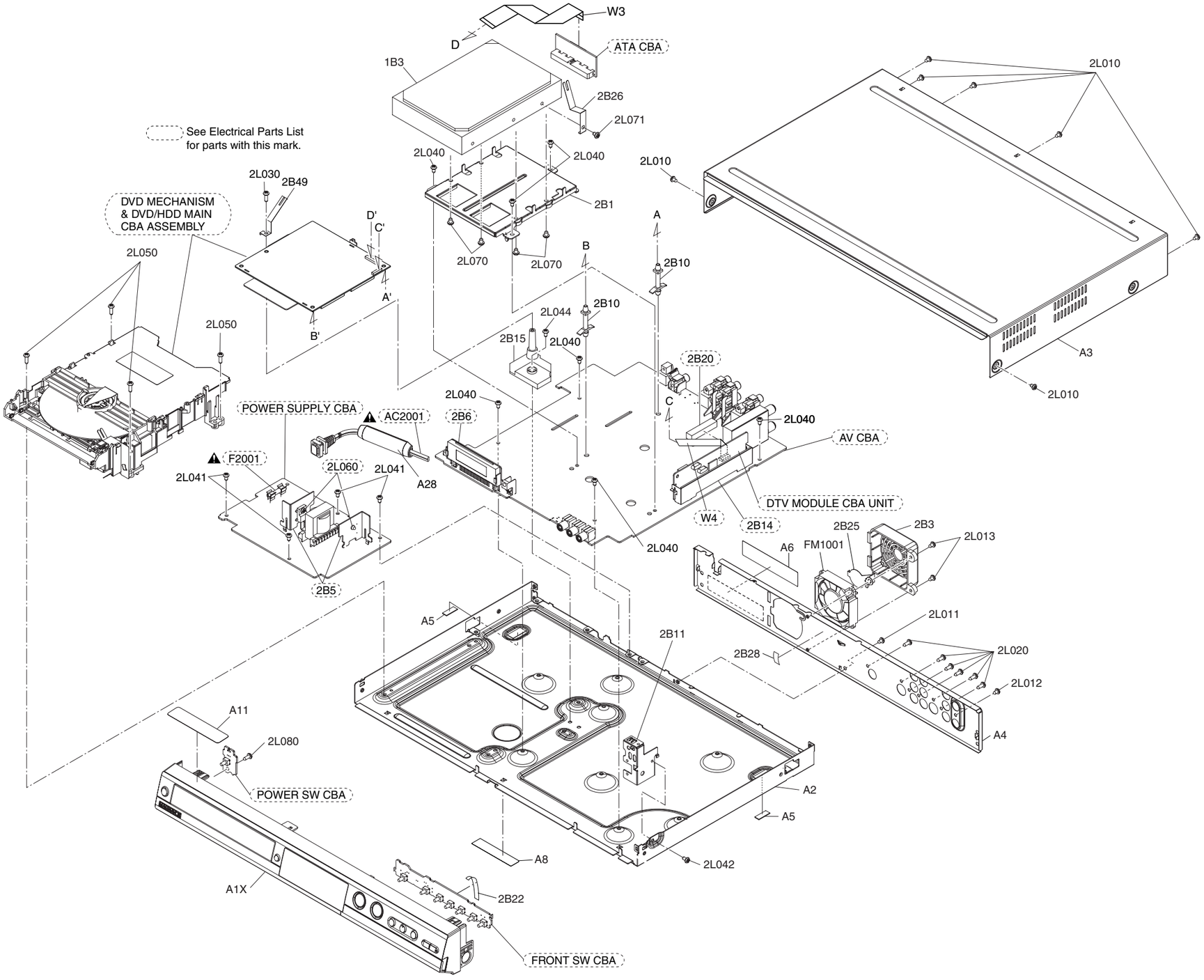


KRC102S-RTK/P

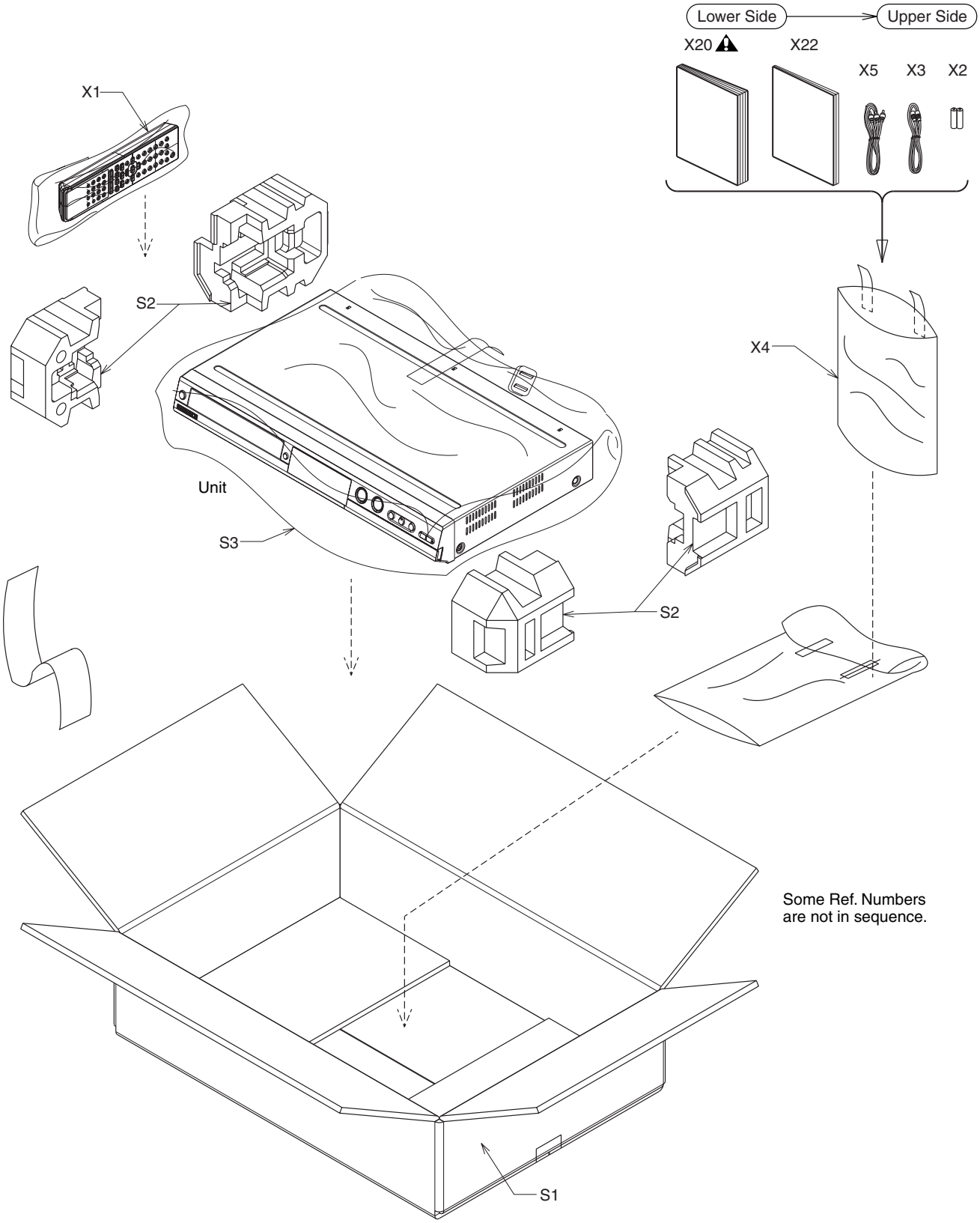


EXPLODED VIEWS

Cabinet



Packing


Lower Side
Upper Side
X20
X22
X5
X3
X2
X1
S2
X4
Unit
S3
S2
S1
Some Ref. Numbers
are not in sequence.

MECHANICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTE: Parts that are not assigned part numbers (---------) are not available.

Ref. No.	Description	Part No.
A1X	FRONT ASSEMBLY E2H00UD	1VM222975
A2	CHASSIS E2H40UD	1VM121070
A3	TOP COVER(BLACK) E2H50UD	1VM323804
A4	REAR PANEL E2H00UD	1VM222961
A5	FOOT H5100UD	0VM406940A
A6	MODEL NO LABEL E2H00UD	---------
A8	RFID LABEL(NO PRINTING) E9A80UD	---------
A11	TELEPHONE NO. LABEL H9670UD	---------
A28	HOLDER EAS(H9410UD) MAKER NO.EM150DR	0VM415877
1B3	HARD DISK DRIVE 80GB ST380215ACE	UHDD809VE002
2B1	HDD BRACKET E2H40UD	1VM323624
2B3	FAN COVER E2H40UD	1VM425696
2B10	PCB SUPPORT/PCB SPACERS KGLS-14S	XP0U027WD001
2B11	FRONT BRACKET R E2A00JD	1VM424123F
2B15	MAIN PCB HOLDER E2B10ED	1VM323176A
2B22	HIMELON TAPE(30*5) E7C40UD	1VM425436
2B25	FAN EARTH E6800ED	1VM320812
2B26	HDD EARTH PLATE E2H40UD	1VM425481
2B28	TAPE HIMELON H9206JD	0VM413956
2B49	M-PCB PLATE EARTH E6700UD	1VM421132
2L010	SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI	GBHC3050
2L011	SCREW C-TIGHT M3X5 BIND HEAD +	GBCC3050
2L012	SCREW C-TIGHT M3X5 BIND HEAD +	GBCC3050
2L013	SCREW C-TIGHT M3X5 BIND HEAD +	GBCC3050
2L020	SCREW B-TIGHT M3X8 BIND HEAD+	GBHB3080
2L030	SCREW P-TIGHT 3X10 BIND HEAD+	GBJP3100
2L040	SCREW S-TIGHT M3X6 BIND HEAD+	GBJS3060
2L041	SCREW S-TIGHT M3X6 BIND HEAD+	GBJS3060
2L042	SCREW S-TIGHT M3X6 BIND HEAD+	GBJS3060
2L044	SCREW S-TIGHT M3X6 BIND HEAD+	GBJS3060
2L050	SCREW S-TIGHT M3X10 BIND HEAD+	GBJS3100
2L070	INCH SCREW 3.4X5 +	SAC3T050
2L071	INCH SCREW 3.4X5 +	SAC3T050
2L080	SCREW P-TIGHT M3X8 BIND HEAD+	GBJP3080
FM1001	MOTOR DC FAN D05U-12TS1 09(UX)	MMEZL12NH008
W3	WIRE ASSEMBLY HDD ATA 40PIN FFC WX1E2H00-001	WX1E2H00-001
	PACKING	
S1	GIFT BOX CARTON E2H00UD	1VM323852
S2	SIDE PAD E2H00UD	1VM121123
S3	UNIT BAG E5500UD	0VM411683
	ACCESSORIES	
X1	REMOTE CONTROL UNIT NB504UD	NB504UD
X2	BATTERY R03-B500/01S	XB0M451CZB01
X3	RF CABLE 2.5C-2V	WPZ0901TM002
X4	ACCESSORY BAG E5795ED	0VM416059
X5	AV CORD WPZ0102TM015	WPZ0102TM015
X20⚠	OWNERS MANUAL E2H00UD	1VMN23645
X22	QUICK GUIDE E2H00UD	1VMN23646

ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTES:

1. Parts that are not assigned part numbers (---------) are not available.
2. Tolerance of Capacitors and Resistors are noted with the following symbols.

C.....±0.25% D.....±0.5% F.....±1%

G.....±2% J.....±5% K.....±10%

M.....±20% N.....±30% Z.....+80/-20%

DVD MECHANISM & DVD/HDD MAIN CBA ASSEMBLY

Ref. No.	Description	Part No.
1B2	DVD MECHANISM & DVD/HDD MAIN CBA ASSEMBLY	N78F4DUN

DTV MODULE CBA UNIT

Ref. No.	Description	Part No.
	DTV MODULE CBA UNIT	1VSA15833

AV ASSEMBLY

Ref. No.	Description	Part No.
	AV ASSEMBLY Consists of the following	1VSA15821
	AV CBA (AV PCB A) FRONT SW CBA (AV PCB B) POWER SW CBA (AV PCB C)	---------- ---------- ----------

AV CBA

Ref. No.	Description	Part No.
	AV CBA (AV PCB A) Consists of the following:	----------
	CAPACITORS	
C1001	ELECTROLYTIC CAP. 100µF/6.3V M	CE0KMASDL101
C1003	ELECTROLYTIC CAP. 100µF/6.3V M	CE0KMASDL101
C1004	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1005	ELECTROLYTIC CAP. 100µF/6.3V M	CE0KMASDL101
C1006	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1007	ELECTROLYTIC CAP. 47µF/16V M	CE1CMASDL470
C1008	ELECTROLYTIC CAP. 100µF/16V M	CE1CMASDL101
C1009	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1010	ELECTROLYTIC CAP. 100µF/6.3V M	CE0KMASDL101
C1011	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V	CHD1JK30B103
C1012	ELECTROLYTIC CAP. 100µF/16V M	CE1CMASDL101
C1013	CHIP CERAMIC CAP.(1608) B K 0.1µF/25V	CHD1EK30B104
C1014	ELECTROLYTIC CAP. 1000µF/6.3V M	CE0KMASDL102
C1015	ELECTROLYTIC CAP. 1000µF/6.3V M	CE0KMASDL102
C1016	ELECTROLYTIC CAP. 100µF/6.3V M	CE0KMASDL101
C1029	ELECTROLYTIC CAP. 1000µF/6.3V M	CE0KMASDL102
C1069	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1101	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1102	ELECTROLYTIC CAP. 100µF/6.3V M	CE0KMASDL101
C1121	ELECTROLYTIC CAP. 10µF/16V M H7	CE1CMAVSL100
C1122	ELECTROLYTIC CAP. 10µF/16V M	CE1CMASDL100
C1123	CHIP CERAMIC CAP.(1608) CH J 33pF/50V	CHD1JJ3CH330
C1124	CHIP CERAMIC CAP.(1608) CH J 33pF/50V	CHD1JJ3CH330
C1125	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1135	ELECTROLYTIC CAP. 220µF/10V M H7	CE1AMAVSL221
C1171	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C1172	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C1175	ELECTROLYTIC CAP. 10µF/16V M	CE1CMASDL100
C1176	ELECTROLYTIC CAP. 10µF/16V M	CE1CMASDL100
C1181	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C1182	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C1185	ELECTROLYTIC CAP. 10µF/16V M	CE1CMASDL100
C1186	ELECTROLYTIC CAP. 10µF/16V M	CE1CMASDL100
C1201	ELECTROLYTIC CAP. 10µF/16V M	CE1CMASDL100
C1202	ELECTROLYTIC CAP. 10µF/16V M H7	CE1CMAVSL100
C1203	CHIP CERAMIC CAP.(1608) CH J 470pF/50V	CHD1JJ3CH471
C1204	CHIP CERAMIC CAP.(1608) CH J 470pF/50V	CHD1JJ3CH471
C1205	CHIP CERAMIC CAP.(1608) CH J 68pF/50V	CHD1JJ3CH680
C1206	CHIP CERAMIC CAP.(1608) CH J 68pF/50V	CHD1JJ3CH680
C1211	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1212	ELECTROLYTIC CAP. 330µF/6.3V M H7	CE0KMAVSL331
C1221	ELECTROLYTIC CAP. 10µF/16V M	CE1CMASDL100
C1222	ELECTROLYTIC CAP. 10µF/16V M	CE1CMASDL100
C1241	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1247	CHIP CERAMIC CAP.(1608) B K 1µF/10V	CHD1AK30B105
C1301	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1302	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1303	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1304	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1305	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1306	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1313	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V	CHD1JK30B103
C1314	ELECTROLYTIC CAP. 22µF/16V M H7	CE1CMAVSL220
C1315	ELECTROLYTIC CAP. 100µF/6.3V H7	CE0KMAVSL101
C1316	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1317	CHIP CERAMIC CAP.(1608) CH D 10pF/50V	CHD1JD3CH100
C1331	CHIP CERAMIC CAP.(1608) CH J 33pF/50V	CHD1JJ3CH330
C1333	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1335	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1405	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V	CHD1JK30B103
C1406	ELECTROLYTIC CAP. 1µF/50V M	CE1JMASDL1R0
C1407	ELECTROLYTIC CAP. 1µF/50V M	CE1JMASDL1R0
C1408	ELECTROLYTIC CAP. 1µF/50V M	CE1JMASDL1R0
C1409	ELECTROLYTIC CAP. 22µF/16V M	CE1CMASDL220
C1410	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V	CHD1JK30B103
C1411	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1413	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1414	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1415	ELECTROLYTIC CAP. 100µF/6.3V M	CE0KMASDL101
C1417	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V	CHD1JZ30F104
C1418	ELECTROLYTIC CAP. 470µF/6.3V M	CE0KMASDL471
C1419	ELECTROLYTIC CAP. 1000µF/6.3V M	CE0KMASDL102
C1420	ELECTROLYTIC CAP. 470µF/6.3V M	CE0KMASDL471
C1421	ELECTROLYTIC CAP. 470µF/6.3V M	CE0KMASDL471
C1501	ELECTROLYTIC CAP. 1000µF/6.3V M	CE0KMASDL102

Ref. No.	Description	Part No.
C1502	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1503	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1506	CHIP CERAMIC CAP.(1608) CH J 22pF/50V	CHD1JJ3CH220
C1507	CHIP CERAMIC CAP. CH J 18pF/50V	CHD1JJ3CH180
C1508	CHIP CERAMIC CAP.(1608) B K 0.1μF/25V	CHD1EK30B104
If C1509 is 0.015μF, then IC1502 is R3112N191A-TR-FA or BU4219G-TR.		
C1509	CHIP CERAMIC CAP.(1608) B K 0.015μF/50V	CHD1JK30B153
IC1502	VOLTAGE DETECT R3112N191A-TR-FA	QSZBA0TRC021
IC1502	RESET IC BU4219G-TR	QSZBA0TRM090
If C1509 is 0.1μF, then IC1502 is PST3619NR.		
C1509	CHIP CERAMIC CAP.(1608) B K 0.1μF/25V	CHD1EK30B104
IC1502	SYSTEM RESET IC PST3619NR	QSZBA0TMM151
C1510	CHIP CERAMIC CAP.(1608) B K 1000pF/50V	CHD1JK30B102
C1511	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1512	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C1513	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C1575	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
C1576	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
C1577	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1578	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1601	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
C1602	CHIP CERAMIC CAP.(1608) B K 0.1μF/25V	CHD1EK30B104
C1604	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1605	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
C1606	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1607	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1608	ELECTROLYTIC CAP. 3.3μF/50V M	CE1JMASDL3R3
C1609	ELECTROLYTIC CAP. 3.3μF/50V M	CE1JMASDL3R3
C1610	ELECTROLYTIC CAP. 3.3μF/50V M H7	CE1JMAVSL3R3
C1611	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C1612	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1613	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
C1701	ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASDL4R7
C1702	ELECTROLYTIC CAP. 2.2μF/50V M H7	CE1JMAVSL2R2
C1703	ELECTROLYTIC CAP. 2.2μF/50V M H7	CE1JMAVSL2R2
C1704	ELECTROLYTIC CAP. 2.2μF/50V M H7	CE1JMAVSL2R2
C1705	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C1706	ELECTROLYTIC CAP. 3.3μF/25V M H7	CE1EMAVSL3R3
C1707	ELECTROLYTIC CAP. 3.3μF/25V M H7	CE1EMAVSL3R3
C1708	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1709	CHIP CERAMIC CAP.(1608) B K 0.022μF/50V	CHD1JK30B223
C1710	ELECTROLYTIC CAP. 2.2μF/50V M H7	CE1JMASSL2R2
C1711	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1713	CHIP CERAMIC CAP.(1608) B K 0.1μF/25V	CHD1EK30B104
C1714	CHIP CERAMIC CAP.(1608) B K 0.1μF/25V	CHD1EK30B104
C1715	ELECTROLYTIC CAP. 0.33μF/50V M	CE1JMASDLR33
C1716	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C1718	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C1719	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C1720	CHIP CERAMIC CAP.(1608) B K 0.033μF/50V	CHD1JK30B333
C1721	CHIP CERAMIC CAP.(1608) B K 0.1μF/25V	CHD1EK30B104
C1723	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
C1724	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1725	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1726	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1727	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL1R0
C1747	CHIP CERAMIC CAP.(1608) B K 0.033μF/50V	CHD1JK30B333
C1749	CHIP CERAMIC CAP.(1608) CH J 47pF/50V	CHD1JJ3CH470
C1750	CHIP CERAMIC CAP.(1608) CH J 22pF/50V	CHD1JJ3CH220
C1751	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1752	ELECTROLYTIC CAP. 1000μF/6.3V M	CE0KMASDL102
C1755	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C1756	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103

Ref. No.	Description	Part No.
C1757	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
C1759	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
C1760	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
C1761	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C1762	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C1764	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1766	CHIP CERAMIC CAP. F Z 0.01μF/50V	CHD1JZ30F103
C1767	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
CONNECTORS		
CN1001	CONNECTOR FFC 34P IMSA-9615S-34A-PP-A	JC96J34ER007
CN1002	WIRE ASSEMBLY AV-HDD 3PIN WIRE WX1E2H40-010	WX1E2H40-010
CN1051	WIRE ASSEMBLY AV-MAIN 30PIN FFC WX1E2H40-002	WX1E2H40-002
CN1061	FFC CONNECTOR IMSA-9615S-06A-PP-A	JC96J06ER007
CN1101	WIRE ASSEMBLY AV-MAIN 28PIN FFC WX1E2H00-002	WX1E2H00-002
CN1601	PH CONNECTOR TOP 2P B2B-PH-K-S (LF)(SN)	J3PHC02JG029
CN1753	FFC CONNECTOR IMSA-9615S-06A-PP-A	JC96J06ER007
DIODES		
D1002	ZENER DIODE MTZJT-7711B	QDTB00MTZJ11
D1003	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1004	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1005	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1006	SCHOTTKY BARRIER DIODE SB140	NDQZ000SB140
D1007	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1008	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1009	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1010	ZENER DIODE MTZJT-776.8B	QDTB0MTZJ6R8
D1011	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1012	ZENER DIODE MTZJT-779.1B	QDTB0MTZJ9R1
D1013	ZENER DIODE MTZJT-7715B	QDTB00MTZJ15
D1014	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1015	RECTIFIER DIODE 1N4005	NDQZ001N4005
D1017	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1018	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1019	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1020	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1021	DIODE 1N5397-B	NDLZ001N5397
D1022	DIODE 1N5397-B	NDLZ001N5397
D1023	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1024	ZENER DIODE MTZJT-774.3A	QDTA0MTZJ4R3
D1026	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1028	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1031	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1301	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1302	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1303	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1304	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1311	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1312	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1313	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1314	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1401	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1402	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1403	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1405	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1505	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1507	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1508	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1510	PCB JUMPER D0.6-P10.0	JW10.0T
D1701	PCB JUMPER D0.6-P10.0	JW10.0T
D1703	PCB JUMPER D0.6-P10.0	JW10.0T

Ref. No.	Description	Part No.
D1720	ZENER DIODE MTZJT-7733B	QDTB00MTZJ33
D1753	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
	ICS	
IC1001	IC REGULATOR TLV1117I TO-220	NSZBA0STY245
IC1101	IC SWITCHING CD4052BNSR	NSZBA0TTY091
IC1102	IC OP AMP UTC4580E	NSZBA0T2H010
IC1201	IC OP AMP UTC4558	NSZBA0S2H001
IC1301	VIDEO SWITCH MM1697AJBE	QSZBA0TMM150
IC1401	DRIVER FOR DVD MM1637XVBE	QSZBA0TMM102
IC1501	IC MICROCONTROLLER MN101C77AFP1	QSZAB0RMS080
If IC1502 is R3112N191A-TR-FA or BU4219G-TR, then C1509 is 0.015μF.		
IC1502	VOLTAGE DETECT R3112N191A-TR-FA	QSZBA0TRC021
IC1502	RESET IC BU4219G-TR	QSZBA0TRM090
C1509	CHIP CERAMIC CAP.(1608) B K 0.015μF/50V	CHD1JK30B153
If IC1502 is PST3619NR, then C1509 is 0.1μF.		
IC1502	SYSTEM RESET IC PST3619NR	QSZBA0TMM151
C1509	CHIP CERAMIC CAP.(1608) B K 0.1μF/25V	CHD1EK30B104
IC1503	IC VOLTAGE REGULATOR PQ070XFC1SZF / 4PIN	QSZBA0RSH083
IC1504	IC VOLTAGE REGULATOR PQ070XFC1SZF / 4PIN	QSZBA0RSH083
IC1602	VFD DRIVER IC SC16313G	NSZBA0T0S005
IC1701	IC MTS DECORDER AN5832SA-E1V	QSZBA0TMS003
IC1755	IC VOLTAGE REGULATOR PQ070XFC1SZF / 4PIN	QSZBA0RSH083
IC1757	IC EEPROM AT24C128N-10SU-1.8 S	NSZBA0TAZ083
	COILS	
L1001	CHOKE COIL 22μH-K	LLBD00PKV021
L1002	CHOKE COIL 22μH-K	LLBD00PKV021
L1003	CHOKE COIL 22μH-K	LLBD00PKV021
L1004	POWER INDUCTORS CWKBNP-180K	LLF1800KV002
L1005	COIL SEALED POWER INDUCTORS CWKBNP-470K	LLF4700KV002
L1240	INDUCTOR(100μH K) LAP02TA101K	LLAXKATTU101
L1242	INDUCTOR(0.47μH K) LAP02TAR47K	LLAXKATTUR47
L1301	PCB JUMPER D0.6-P5.0	JW5.0T
L1401	PCB JUMPER D0.6-P5.0	JW5.0T
L1610	INDUCTOR(100μH K) LAP02TA101K	LLAXKATTU101
L1701	CARBON RES. 1/4W J 3.3 Ω	RCX4JATZ03R3
L1751	CHOKE COIL 22μH-K	LLBD00PKV021
L1752	BEAD INDUCTOR FBR07HA121TB-00	LLBF00ZTU021
L1753	CHOKE COIL 22μH-K	LLBD00PKV021
L1760	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
L1761	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
L1762	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
L1763	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
L1764	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
	TRANSISTORS	
Q1004	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1005	TRANSISTOR S2Y52(FUNAI Q H)	QQWZ00S2Y52Q
Q1006	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1007	TRANSISTOR KTC3205-Y-AT/P	NQSYKTC3205P
Q1010	TRANSISTOR(PB FREE) KTC2026-Y/P	NQEYKTC2026P
Q1012	TRANSISTOR KTB1151-Y-U/P	NQEY0KTB1151
Q1013	TRANSISTOR KTC3203-Y-AT/P	NQSYKTC3203P
Q1014	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1101	TRANSISTOR KRC102S-RTK/P	NQ1ZKRC102SP
Q1102	TRANSISTOR KRC102S-RTK/P	NQ1ZKRC102SP
Q1201	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1202	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1203	TRANSISTOR KTA1267-GR-AT/P	NQS1KTA1267P
Q1241	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1302	TRANSISTOR KTA1267-GR-AT/P	NQS1KTA1267P
Q1303	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P

Ref. No.	Description	Part No.
Q1304	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1501	TRANSISTOR KTA1267-GR-AT/P	NQS1KTA1267P
Q1502	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1505	NPN TRANSISTOR KRC103M-AT/P	NQSZKRC103MP
Q1506	NPN TRANSISTOR KRC103M-AT/P	NQSZKRC103MP
Q1601	NPN TRANSISTOR KRC103M-AT/P	NQSZKRC103MP
Q1602	NPN TRANSISTOR KRC103M-AT/P	NQSZKRC103MP
Q1603	TRANSISTOR KTA1267-GR-AT/P	NQS1KTA1267P
Q1604	TRANSISTOR KTA1267-GR-AT/P	NQS1KTA1267P
Q1755	NPN TRANSISTOR KRC103M-AT/P	NQSZKRC103MP
	RESISTORS	
R1001	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1005	CHIP RES. 1/10W J 110 Ω	RRXAJR5Z0111
R1006	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1010	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1012	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1013	CARBON RES. 1/4W J 180 Ω	RCX4JATZ0181
R1014	CARBON RES. 1/4W J 180 Ω	RCX4JATZ0181
R1016	CARBON RES. 1/4W J 120 Ω	RCX4JATZ0121
R1017	CHIP RES. 1/10W J 620 Ω	RRXAJR5Z0621
R1018	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R1021	CARBON RES. 1/4W G 390 Ω	RCX4GATZ0391
R1022	CARBON RES. 1/4W J 12k Ω	RCX4JATZ0123
R1023	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1024	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R1025	CARBON RES. 1/4W J 6.8k Ω	RCX4JATZ0682
R1026	CARBON RES. 1/4W J 6.8k Ω	RCX4JATZ0682
R1027	CARBON RES. 1/4W J 6.8k Ω	RCX4JATZ0682
R1028	CHIP RES. 1/10W J 220k Ω	RRXAJR5Z0224
R1029	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1030	CHIP RES. 1/10W J 330 Ω	RRXAJR5Z0331
R1031	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1032	CHIP RES. 1/10W J 10 Ω	RRXAJR5Z0100
R1035	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R1036	CARBON RES. 1/4W J 270 Ω	RCX4JATZ0271
R1037	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R1038	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1039	CHIP RES. 1/10W J 220 Ω	RRXAJR5Z0221
R1042	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1049	CHIP RES. 1/10W J 1.1k Ω	RRXAJR5Z0112
R1050	PCB JUMPER D0.6-P12.5	JW12.5T
R1101	CHIP RES.(1608) 1/10W F 68k Ω	RRXAFR5H0683
R1102	CHIP RES.(1608) 1/10W F 68k Ω	RRXAFR5H0683
R1103	CHIP RES.(1608) 1/10W F 68k Ω	RRXAFR5H0683
R1104	CHIP RES.(1608) 1/10W F 68k Ω	RRXAFR5H0683
R1105	CHIP RES.(1608) 1/10W F 68k Ω	RRXAFR5H0683
R1106	CHIP RES.(1608) 1/10W F 68k Ω	RRXAFR5H0683
R1107	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R1108	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R1109	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R1110	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R1111	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R1112	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R1113	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R1114	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R1117	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R1120	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R1121	CHIP RES.(1608) 1/10W F 33k Ω	RRXAFR5H0333
R1122	CHIP RES.(1608) 1/10W F 33k Ω	RRXAFR5H0333
R1125	CHIP RES. 1/10W F 43k Ω	RRXAFR5H0433
R1126	CHIP RES. 1/10W F 43k Ω	RRXAFR5H0433
R1127	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183

Ref. No.	Description	Part No.
R1128	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R1139	CHIP RES. 1/10W J 300 Ω	RRXAJR5Z0301
R1140	CHIP RES. 1/10W J 750 Ω	RRXAJR5Z0751
R1173	CHIP RES. 1/10W J 180k Ω	RRXAJR5Z0184
R1174	CHIP RES. 1/10W J 180k Ω	RRXAJR5Z0184
R1183	CHIP RES. 1/10W J 180k Ω	RRXAJR5Z0184
R1184	CHIP RES. 1/10W J 180k Ω	RRXAJR5Z0184
R1201	CHIP RES.(1608) 1/10W F 3.6k Ω	RRXAFR5H0362
R1202	CHIP RES.(1608) 1/10W F 3.6k Ω	RRXAFR5H0362
R1203	CHIP RES. 1/10W J 3.3k Ω	RRXAJR5Z0332
R1204	CHIP RES. 1/10W J 3.3k Ω	RRXAJR5Z0332
R1205	CHIP RES.(1608) 1/10W F 11k Ω	RRXAFR5H0113
R1206	CHIP RES.(1608) 1/10W F 11k Ω	RRXAFR5H0113
R1213	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R1221	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R1222	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R1223	CHIP RES. 1/10W J 470 Ω	RRXAJR5Z0471
R1224	CHIP RES. 1/10W J 470 Ω	RRXAJR5Z0471
R1225	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R1226	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R1227	CHIP RES. 1/10W J 220 Ω	RRXAJR5Z0221
R1228	CHIP RES. 1/10W J 220 Ω	RRXAJR5Z0221
R1232	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R1233	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1242	CHIP RES. 1/10W J 1.8k Ω	RRXAJR5Z0182
R1243	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R1244	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R1245	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1246	CHIP RES. 1/10W J 220 Ω	RRXAJR5Z0221
R1248	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R1301	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1302	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1304	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1311	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1312	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1313	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1314	CHIP RES. 1/10W J 470 Ω	RRXAJR5Z0471
R1315	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R1317	CHIP RES. 1/10W J 820 Ω	RRXAJR5Z0821
R1331	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R1332	CHIP RES. 1/10W J 910 Ω	RRXAJR5Z0911
R1333	CHIP RES. 1/10W J 470 Ω	RRXAJR5Z0471
R1337	CHIP RES. 1/10W J 1.5k Ω	RRXAJR5Z0152
R1403	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R1405	CHIP RES. 1/10W J 3k Ω	RRXAJR5Z0302
R1406	CHIP RES.(1608) 1/10W F 220 Ω	RRXAFR5H0221
R1407	CHIP RES.(1608) 1/10W F 200 Ω	RRXAFR5H0201
R1408	CHIP RES.(1608) 1/10W F 220 Ω	RRXAFR5H0221
R1409	CHIP RES.(1608) 1/10W F 220 Ω	RRXAFR5H0221
R1411	CHIP RES. 1/10W J 15k Ω	RRXAJR5Z0153
R1420	CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R1421	CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R1422	CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R1423	CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R1424	CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R1430	CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R1501	CHIP RES. 1/10W J 3.3k Ω	RRXAJR5Z0332
R1502	CHIP RES. 1/10W J 3.3k Ω	RRXAJR5Z0332
R1503	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1505	CHIP RES. 1/10W J 820k Ω	RRXAJR5Z0824
R1506	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1507	CHIP RES. 1/10W J 470 Ω	RRXAJR5Z0471
R1508	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000

Ref. No.	Description	Part No.
R1513	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1514	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1515	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1516	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1518	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1519	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1520	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1523	CHIP RES. 1/10W J 470k Ω	RRXAJR5Z0474
R1524	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1527	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1528	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1530	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R1531	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1532	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1533	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R1534	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R1535	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1536	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R1537	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R1538	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R1539	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R1541	CHIP RES. 1/10W J 5.6k Ω	RRXAJR5Z0562
R1542	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1545	CHIP RES. 1/10W J 6.8k Ω	RRXAJR5Z0682
R1546	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R1547	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R1548	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1554	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1555	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1556	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1557	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1570	CHIP RES. 1/10W J 2.7k Ω	RRXAJR5Z0272
R1571	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R1572	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R1573	CHIP RES.(1608) 1/10W F 1.5k Ω	RRXAFR5H0152
R1574	CHIP RES. 1/10W F 1.1k Ω	RRXAFR5H1101
R1575	CHIP RES. 1/10W F 15k Ω	RRXAFR5H0153
R1576	CHIP RES.(1608) 1/10W F 3.9k Ω	RRXAFR5H0392
R1577	CHIP RES.(1608) 1/10W F 10k Ω	RRXAFR5H0103
R1578	CHIP RES.(1608) 1/10W F 10k Ω	RRXAFR5H0103
R1579	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1580	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1581	PCB JUMPER D0.6-P15.0	JW15.0T
R1582	CHIP RES. 1/10W J 2.7k Ω	RRXAJR5Z0272
R1601	CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R1602	CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R1603	CARBON RES. 1/4W J 330 Ω	RCX4JATZ0331
R1604	PCB JUMPER D0.6-P5.0	JW5.0T
R1606	CHIP RES. 1/10W J 5.6k Ω	RRXAJR5Z0562
R1607	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1608	CHIP RES. 1/10W J 5.6k Ω	RRXAJR5Z0562
R1609	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1610	CARBON RES. 1/4W J 27 Ω	RCX4JATZ0270
R1611	CARBON RES. 1/4W J 9.1 Ω	RCX4JATZ09R1
R1612	CARBON RES. 1/4W J 9.1 Ω	RCX4JATZ09R1
R1618	CHIP RES. 1/10W J 68k Ω	RRXAJR5Z0683
R1619	CHIP RES. 1/10W J 10 Ω	RRXAJR5Z0100
R1621	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1622	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R1623	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R1624	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R1625	CHIP RES. 1/10W J 33 Ω	RRXAJR5Z0330
R1626	CHIP RES. 1/10W J 6.8k Ω	RRXAJR5Z0682

Ref. No.	Description	Part No.
R1701	CHIP RES. 1/10W J 180k Ω	RRXAJR5Z0184
R1704	CHIP RES. 1/10W J 3.3k Ω	RRXAJR5Z0332
R1723	CHIP RES. 1/10W J 220 Ω	RRXAJR5Z0221
R1724	CHIP RES. 1/10W J 220 Ω	RRXAJR5Z0221
R1752	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1753	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1755	CHIP RES.(1608) 1/10W F 10k Ω	RRXAFR5H0103
R1756	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1759	CHIP RES.(1608) 1/10W F 120 Ω	RRXAFR5H0121
R1764	CHIP RES.(1608) 1/10W F 10k Ω	RRXAFR5H0103
R1765	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1767	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1768	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1769	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R1772	CHIP RES. 1/10W J 1.1k Ω	RRXAJR5Z0112
R1775	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1780	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
	SWITCHES	
SW1501	TACT SWITCH SKQSAF001A	SST0101AL041
SW3011	TACT SWITCH SKQSAF001A	SST0101AL041
	MISCELLANEOUS	
2B6	FL HOLDER E6700UD	1VM320515A
2B14	MODULE PCB HOLDER E7C40UD	1VM323527
2B20	PCB CUSHION E2H40UD	1VM425490
FL1601	FL 7-BT-310NA	TVFD1C0FT057
JK2101	MINI DIN SOCKET MDC1-34-020	JXEL040RP003
JK2102	RCA JACK(YELLOW) MTJ-032-05B-20(B110)	JXRL010LY135
JK2103	RCA JACK(WHITE) MTJ-032-05B-22(B110)	JXRL010LY136
JK2104	RCA JACK(RED) MTJ-032-05A-21(B110)	JYRL010LY029
JK2105	S TYPE JACK MDC-050V-2.4 LF(B110	JXEL040LY003
JK2106	RCA JACK 3PIN MSD-243V-07 NI FE LF	JXRL030LY124
JK2201	RCA JACK 3PIN MSD-243V-07 NI FE LF	JXRL030LY124
JK2202	S TYPE JACK MDC-050V-2.4 LF(B110	JXEL040LY003
JK2203	RCA JACK 3PIN MSD-243V-18 NI FE LF	JXRL030LY132
JK2206	RCA JACK(BLACK) MSP-251V-01 NI FE LF	JXRL010LY125
JP1053	PCB JUMPER D0.6-P15.0	JW15.0T
JP1303	PCB JUMPER D0.6-P20.0	JW20.0T
JP1311	PCB JUMPER D0.6-P7.5	JW7.5T
JP1402	PCB JUMPER D0.6-P5.0	JW5.0T
JP1404	PCB JUMPER D0.6-P9.0	JW9.0T
JP1405	PCB JUMPER D0.6-P5.0	JW5.0T
JP1501	PCB JUMPER D0.6-P6.0	JW6.0T
JP1502	PCB JUMPER D0.6-P6.0	JW6.0T
RS1610	SENSOR REMOTE RECEIVER KSM-602LU2S	USESJRSKK048
TU1701	TUNER 115U1003AF	UTUNNTUSP033
W4	WIRE ASSEMBLY DTV 6PIN FFC WX1E2H00-003	WX1E2H00-003
X1501	CERAMIC RESONATOR ZTT8.00MT47	FY0805PLN004
X1502	RESONATOR XTAL 32.768KHz QTF38-32.768K125P15L	FXC323LQUA03

FRONT SW CBA

Ref. No.	Description	Part No.
	FRONT SW CBA (AV PCB B) Consists of the following:	----------
	CONNECTORS	
CN1062	WIRE ASSEMBLY AV-SW 6PIN FFC WX1E2H40-005	WX1E2H40-005
CN1063	PH CONNECTOR SIDE 2P S2B-PH-K-S(LF)(SN)	J3PHC02JG030
	RESISTORS	
R3001	CHIP RES. 1/10W J 300 Ω	RRXAJR5Z0301
R3002	CHIP RES. 1/10W J 620 Ω	RRXAJR5Z0621
R3003	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R3004	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R3005	CHIP RES. 1/10W J 6.8k Ω	RRXAJR5Z0682
R3006	CHIP RES. 1/10W J 620 Ω	RRXAJR5Z0621
R3007	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R3008	CHIP RES. 1/10W J 6.8k Ω	RRXAJR5Z0682
R3009	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R3010	CHIP RES. 1/10W J 300 Ω	RRXAJR5Z0301
	SWITCHES	
SW3002	TACT SWITCH SKQSAF001A	SST0101AL041
SW3005	TACT SWITCH SKQSAF001A	SST0101AL041
SW3008	TACT SWITCH SKQSAF001A	SST0101AL041
SW3009	TACT SWITCH SKQSAF001A	SST0101AL041
SW3012	TACT SWITCH SKQSAF001A	SST0101AL041
SW3013	TACT SWITCH SKQSAF001A	SST0101AL041
SW3014	TACT SWITCH SKQSAF001A	SST0101AL041

POWER SW CBA

Ref. No.	Description	Part No.
	POWER SW CBA (AV PCB C) Consists of the following:	----------
	CONNECTOR	
CN1064	WIRE ASSEMBLY P-SW - SW 2PIN WX1E2H40-006	WX1E2H40-006
	SWITCH	
SW3010	TACT SWITCH SKQSAF001A	SST0101AL041

POWER SUPPLY CBA

Ref. No.	Description	Part No.
	POWER SUPPLY CBA Consists of the following:	1VSA16239
	CAPACITORS	
C2001⚠	ACROSS THE LINE CAP. 0.1U/275V	CT2E104DC016
C2002⚠	SAFETY CAP. 3300pF/250V	CCD2EMA0E332
C2101	CERAMIC CAP. F Z 0.01μF/500V	CCD2JZP0F103
C2102	CERAMIC CAP. F Z 0.01μF/500V	CCD2JZP0F103
C2104	ELECTROLYTIC CAP. 470μF/200V	CA2D4710J002
C2109	CERAMIC CAP. HR 1000pF/2KV	CCD3DKP0R102
C2112	POLYESTER FILM CAP. (PB FREE) 0.1μF/100V J	CA2A104DT018
C2113	POLYESTER FILM CAP. (PB FREE) 0.01μF/100V J	CA2A103DT018
C2114	PCB JUMPER D0.6-P5.0	JW5.0T
C2115	PCB JUMPER D0.6-P5.0	JW5.0T
C2121	POLYESTER FILM CAP. (PB FREE) 0.0068μF/100V J	CA2A682DT018
C2201	ELECTROLYTIC CAP. 22μF/50V M	CE1JMASDL220
C2202	ELECTROLYTIC CAP. 220μF/50V M	CE1JMASDL221
C2203	ELECTROLYTIC CAP. 3300μF/6.3V SL	CE0KMZADL332
C2204	ELECTROLYTIC CAP. 2200μF/25V SL	CE1EMZADL222
C2205	ELECTROLYTIC CAP. 3300μF/6.3V SL	CE0KMZADL332
C2206	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C2207	ELECTROLYTIC CAP. 1000μF/6.3V M	CE0KMASDL102
C2210	ELECTROLYTIC CAP. 470μF/16V M	CE1CMASDL471
C2214	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C2216	ELECTROLYTIC CAP. 3300μF/6.3V SL	CE0KMZADL332
C2222	CERAMIC CAP. B K 470pF/500V	CCD2JKP0B471
C2224	CERAMIC CAP. B K 470pF/500V	CCD2JKP0B471
C2226	POLYESTER FILM CAP. (PB FREE) 0.0068μF/100V J	CA2A682DT018
C2235	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C2238	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103

Ref. No.	Description	Part No.
	CONNECTOR	
CN2001	WIRE ASSEMBLY FFC PW-AV 34PIN WX1E2H40-003	WX1E2H40-003
	DIODES	
D2101	DIODE 1N5397-B	NDLZ001N5397
D2102	DIODE 1N5397-B	NDLZ001N5397
D2103	DIODE 1N5397-B	NDLZ001N5397
D2104	DIODE 1N5397-B	NDLZ001N5397
D2107	ZENER DIODE MTZJT-7722B	QDTB00MTZJ22
D2108	ZENER DIODE MTZJT-7733B	QDTB00MTZJ33
D2109	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2110	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2111	ZENER DIODE MTZJT-7733B	QDTB00MTZJ33
D2112	ZENER DIODE MTZJT-775.6B	QDTB0MTZJ5R6
D2113	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2201	RECTIFIER DIODE BA157	NDQZ000BA157
D2202	RECTIFIER DIODE BA157	NDQZ000BA157
D2203	SCHOTTKY BARRIER DIODE SB340	NDQZ000SB340
D2204	SCHOTTKY BARRIER DIODE SB390	NDQZ000SB390
D2205	SCHOTTKY BARRIER DIODE SB390	NDQZ000SB390
D2206	SCHOTTKY BARRIER DIODE SB340	NDQZ000SB340
D2207	SCHOTTKY BARRIER DIODE SB340	NDQZ000SB340
D2208	SCHOTTKY BARRIER DIODE SB140	NDQZ000SB140
D2209	SCHOTTKY BARRIER DIODE SB340	NDQZ000SB340
D2210	RECTIFIER DIODE BA157	NDQZ000BA157
D2215	ZENER DIODE MTZJT-7720B	QDTB00MTZJ20
D2216	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2217	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2218	ZENER DIODE MTZJT-7739B	QDTB00MTZJ39
D2219	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2224	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2225	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2226	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2229	DIODE 1ZC43(Q)	QDLZ001ZC43Q
	ICS	
IC2101	PHOTOCOUPLER PS2561A-1(W)	QPEWPS2561A1
IC2201	IC SHUNT REGULATOR KIA431-AT/P	NSZBA0TJY036
IC2204	IC SHUNT REGULATOR KIA431-AT/P	NSZBA0TJY036
	COILS	
L2001	LINEFILTER TLF24HB2730R6	LLBG00ZTU039
L2104	BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
L2201	BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
	TRANSISTORS	
Q2101	FET MOS 2SK3561(Q) IDSS100UA	QFWZ2SK3561Q
Q2102	TRANSISTOR KTC3203-Y-AT/P	NQSYKTC3203P
Q2203	TRANSISTOR(PB FREE) KTC2026-Y/P	NQEYKTC2026P
Q2209	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q2221	TRANSISTOR KTA1267-Y-AT/P	NQSYKTA1267P
	RESISTORS	
R2101	CEMENT RESISTOR 5W J 1.2 Ω H 10MM	RW051R2PAK10
R2103	CARBON RES. 1/4W J 750k Ω	RCX4JATZ0754
R2104	CARBON RES. 1/4W J 750k Ω	RCX4JATZ0754
R2105	CARBON RES. 1/4W J 750k Ω	RCX4JATZ0754
R2106	CARBON RES. 1/4W J 750k Ω	RCX4JATZ0754
R2108	METAL OXIDE FILM RES. 2W J 0.68 Ω	RN02R68ZU001
R2109	CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151
R2113	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R2114	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R2115	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R2116	CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R2117	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R2119	CARBON RES. 1/4W J 120 Ω	RCX4JATZ0121

Ref. No.	Description	Part No.
R2120	PCB JUMPER D0.6-P5.0	JW5.0T
R2212	CHIP RES. 1/10W J 1.5k Ω	RRXAJR5Z0152
R2213	CHIP RES. 1/10W J 15k Ω	RRXAJR5Z0153
R2217	METAL OXIDE FILM RES. 3W J 750 Ω	RN03751ZU001
R2225	CHIP RES. 1/10W J 39k Ω	RRXAJR5Z0393
R2226	CHIP RES.(1608) 1/10W J 0.47 Ω	RRXAR47HH007
R2227	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R2228	CHIP RES. 1/10W J 1.5k Ω	RRXAJR5Z0152
R2229	CHIP RES.(1608) 1/10W F 120 Ω	RRXAFR5H0121
R2230	CHIP RES.(1608) 1/10W F 1k Ω	RRXAFR5H0102
R2231	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R2232	CHIP RES.(1608) 1/10W F 1k Ω	RRXAFR5H0102
R2233	CHIP RES. 1/10W J 200 Ω	RRXAJR5Z0201
R2234	CHIP RES. 1/10W J 680 Ω	RRXAJR5Z0681
R2235	CHIP RES.(1608) 1/10W F 2.0k Ω	RRXAFR5H0202
R2236	CARBON RES. 1/4W J 1.1k Ω	RCX4JATZ0112
R2237	CARBON RES. 1/4W J 1.1k Ω	RCX4JATZ0112
R2238	CARBON RES. 1/4W J 1.1k Ω	RCX4JATZ0112
R2239	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R2240	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R2241	CARBON RES. 1/4W J 1.1k Ω	RCX4JATZ0112
R2242	CHIP RES.(1608) 1/10W J 0.47 Ω	RRXAR47HH007
R2243	CHIP RES. 1/10W J 200 Ω	RRXAJR5Z0201
R2248	CHIP RES. 1/10W J 33k Ω	RRXAJR5Z0333
R2251	CHIP RES. 1/10W J 470k Ω	RRXAJR5Z0474
R2252	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R2271	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R2273	CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R2274	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R2275	PCB JUMPER D0.6-P5.0	JW5.0T
R2279	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R2280	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R2281	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R2282	CHIP RES. 1/10W J 220k Ω	RRXAJR5Z0224
R2283	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
	MISCELLANEOUS	
2B5	HEAT SINK E2A00JD	1VM424636
2L060	SCREW S-TIGHT M3X8 BIND HEAD+	GBJS3080
AC2001⚠	AC CORD W/O A GND WIRE UL/CSA/1660/NO/ BLACK	WAC0162LW010
CR2001⚠	GAP. FNR-G3.10D	FAZ000LD6005
F2001⚠	FUSE TIME LAG SIC2A250VUCPSE	PEG20C0W3003
FH2101	FUSE HOLDER MSF-015 LF (B110)	XH01Z00LY002
FH2102	FUSE HOLDER MSF-015 LF (B110)	XH01Z00LY002
JL2104	PCB JUMPER D0.6-P30.0	JW30.0T
SA2001⚠	SURGE ABSORBER 470V+-10PER	NVQZ10D471KB
T2001⚠	TRANS POWER 7704-S05	LTT3PC0KT028

ATA CBA

Ref. No.	Description	Part No.
	ATA CBA Consists of the following:	1VSA14795
	CONNECTORS	
CN3001	IDC SOCKET 40PIN VT YKF43-0025	JCYKC40JC002
CN3002	FPC/FFC CONNECTOR(40PIN) FH12-40S-0.5SH(89)	JCFHD40HQ007

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